



**ADDIS ABABA UNIVERSITY  
COLLEGE OF LAW AND GOVERNANCE  
STUDIES**

**FEDERALISM AND  
ENVIRONMENTAL POLICY: THE  
CASE OF BURAYOU CITY**

**BY**

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**JUNE, 2018**

**ADDIS ABABA, ETHIOPIA**



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**Federalism and Environmental Policy:  
The Case of Burayou City**

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**June, 2018**





**Declaration**

I the undersigned, declare that this thesis is my original work and has not been presented for a degree in any other university, and that all sources of materials used for this thesis have been duly acknowledged.

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## **Acknowledgments**

First of all I would like to thank almighty God for helping me throughout my carrier and successful accomplishment of my study. Next, I would like to thank my advisor Dr. Ketema Wakjira (PhD) for his strong, critical evaluation and constructive comment in improving the quality of the study, starting from the beginning to its accomplishment. His assistance, support and inspiration on this study were highly valuable. This study wouldn't be realized without his strong contribution and commitment.

Next, I would like to thank all my parents, friends and all others for giving me moral and technical support throughout my MA study. My acknowledgment also goes to my friend Mulalem Abebe who gave me moral support and significance suggestion in the process of my study. I have special thank for my friend Asefa Birhanu who was giving me special support during the time of my study.

My sincere, acknowledgement also goes to all informants at all levels of government, focused group participants, and respondents of questionnaires for giving me valuable information in the process of my study. Finally, I would like to thank the city administration of Burayou for giving me full sponsorship during my study.

## **Abbreviations**

EPA- Environmental Protection Authority

CSA- Central Statistics Agency

GDP- Growth Domestic Product

USD- United States Dollar

SME- Small and Micro Enterprises

USA- United States of America

US - United States

EIA- Environmental Impact Assessment

UNEP- United Nations Environmental Program

IAIA- International Association for Impact Assessment

UN- United Nations

FDRE- Federal Democratic Republic of Ethiopia

ULGDP- Urban Local Government Development Program

IGR- Intergovernmental Relation

UNESCO- United Nations Educational, Scientific and Cultural Organization

FDG- Focused Group Discussion

REDD<sup>+</sup>- Reducing Emission from Deforestation and Forest Degradation

GTZ- German Agency for Technical Cooperation

### **Abstract**

*The aim this research is to analyze the adequacy of environmental policies and legal frameworks, competencies of the federal, regional state and urban local governments in protection of environment. It particularly examined the implementation of environmental policy in the city of Burayou. In doing so, the study employed a mixed research approach; and primary data were collected using interview, FDG, questionnaire and personal observation.*

*The finding of this research shows that there is inadequate policy and legal frameworks for addressing environmental problems at the local level. Due to lack of significant regulations, directives, procedural guidelines, and lack of standards and baselines to protect the environment, the local communities living around the industries have been vulnerable to environmental hazards. Public participation in environmental decision making hardly exists at the city level; and the environmental accountability is yet to be attained. There is weak intergovernmental coordination among environmental sectors at the three levels. There has been little supervision over the environmental sector at the city level; and the environmental sector in the city of Burayou suffers from capacity constraints. Hence, this study contends that there is a need for empowering urban local governments, strengthen environmental policies, and build the capacity of environmental bodies and to promote IGRs for implementation of environmental policies in rapidly urbanizing cities like Burayou.*

**Key Words: Environmental Federalism, Environmental Policy, Industrial Pollution, Burayou**

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## **1. Introduction**

The inception of the federal system in Ethiopia is followed by formulation of different developmental objectives to put the nation from the worst poverty. Besides, in the process of economic development of the country, the Ethiopian government has given special attention to the issue of green economy, and environmental policies have been put in place to meet the sustainable development and to build green economy.

The Environmental policy of Ethiopia was introduced in 1997 but integration of Environmental policy pillars into the development agendas were also begun in 2002/2003. The Growth and Transformation plans I and II of Ethiopia also deals with the issue of environment in its broader sense. Since 2011, the resilient green economy strategy was developed in the country and massive implementation of the environmental agenda began to be implemented (EPA report, 2012). In addition to environmental policy, the country developed a number of legal frameworks to prevent the environment from industrial pollution.

To achieve the objective of sustainable development together with environmentally resilient economy, the Ethiopian government gives considerable attention to renewable energy sources. As a result, construction of hydroelectric powers like the Grand Renaissance Dam which will generate more than 6000 MW and Gilgel Gibe Power plants and etc are the main examples towards building Green economy in the country. Besides, energy from wind has been started near Adama in Oromia and Ashogoda in Tigray. To stop environmental degradation by deforestation massive a forestation programs have been carried out every summer. Not only for domestic markets but also the country aimed to supply renewable energy sources to regional markets like Kenya and Djibouti.

Ethiopia also began to play a great role on the environmental protection campaign of the international arena by representing voice of Africa. For instance, in Copenhagen environmental summit Ethiopia presented the stand of Africa and developing world with regard to the issue of compensation for being polluted by industrial waste of developed countries.

However, despite the fact that environmental policy, legal frameworks and institutions are established in Ethiopia and even if the country's focus on green economy is progressive, there is difficulty of balancing developmental objectives with environmental objectives in the country

with respect to issues of industrial development and environmental protection. The industries which are in operation are causing pollution on the environment and causing a serious health problem on the human being, other living organisms and environment in general. For example, Most of the rivers surrounding both the federal and Oromia regional state capital-Addis Ababa/ Finfinnee are polluted by industrial wastes because different industries discharge waste into the courses of the rivers without any significant treatment. As Kebena and Krishina(undated) cited (CSA,2010), <sup>1</sup>in Addis Ababa the greater proportion (40.9%) of the annual waste water was discharged from textile industries, followed by food and beverage industries constituting about 36.8%. According to this study the total volume of waste water that was discharged from different industries in the city was 4,877,362 (m<sup>3</sup>/year). Likewise, the urban local administrations surrounding Addis Ababa/Finfinnee like Burayou suffer from the problem of industrial pollution.

The people living along these polluted rivers use the river for different purpose including irrigation, washing clothes, for cattle consumption. Moreover, irrigations around the banks of the rivers are highly relied on this polluted water. According to Gebre & Van Rooijen (2009:4) “the concentration of trace metals in vegetables that were grown with waste water: the high concentration of Cadmium, Chromium, Copper, Mercury, Nickel, and Zinc give evidence of industrial pollution traced back in agricultural crops”.

Air pollution is also another effect of industrial pollution, which resulted from industrial emission becoming disastrous to the health of the society living around industries. It causes Asthma and Allergies, Lung Cancer, Eye disease and Cardio Vascular problem and etc<sup>2</sup>.

In addition to industrial wastes, there is also lack of appropriate designed solid waste landfills in most of growing cities in Ethiopia. This is also one of the serious challenges of the city of Burayou. Hence, in the course of study, this research explores the adequacy of the legal frameworks in protecting the environment, institutional frameworks and its implementation in line with the responsibilities of the Federal, the regional state and the local government in case of Burayou city.

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<sup>1</sup> [https://www.abhinavjournal.com/images/Science\\_&\\_Technology/May13/1.pdf](https://www.abhinavjournal.com/images/Science_&_Technology/May13/1.pdf)

<sup>2</sup> <http://cdn.cseindia.org/userfiles/Outdoor-air-pollution-status-and-related-health-effects-in-Ethiopia.pdf>

## **1.1. Statement of the Problem**

The government of the Federal Democratic Republic of Ethiopia has been enacting and implementing national policies and strategies to alleviate poverty and to bring sustainable development (Ethiopian Industrial Development Strategic Plan (2013-2025, 2013:6). The industry sector in general and the manufacturing sector in particular were given due national importance following the formulation of the national industrial policy in 2002 by the FDRE (ibid, 9). According to the 2010/11 CSA report, there are 2,170 medium and large scale industries established in Ethiopia (ibid, P, 13)

As it is stated in industrial development strategic plan in 2011/12 the share of industries in the GDP of the country was 14%. In terms of foreign exchange earnings, the manufacturing sector generated 255.4 million USD. With regard to employment in the same year the share of Small and Micro enterprises exceeds large scale manufacturing industries. SME created job opportunity for 1,148,000 citizens. While the manufacturing sector of the country created job opportunity for 175,641 citizens in the year 2010/11.

Burayu town, one of the cities surrounding Finfine in the western corner, is one of the cities which are witnessing rapid industrial expansion and development. According to the 2016 data from Burayu city investment office, in the city out of 780 investment projects 441 projects started production. These factories which are engaged in production include cement, marble, shoe, foam, plastic, mineral water, metal engineering, and agro processing industries and etc... There are also two abattoirs; one is municipal and other private. Some of the factories are built in an area which is designated as industrial zone in particular in the „Tatek“ industrial zone in and around the former „Tatek“ military camp which latter transformed into industrial zone of the city. Other factories, especially those that were built before the establishment of the Tatek industrial zone, including the two abattoirs, are found scattered throughout the residential areas of the city.

The establishment of these factories in the city has created job opportunities for 23,271 people. Yet, the factories have also posed a clear and present danger on the environment of the city. In consequence, a number of factories have negative impact on environment. Some industries release liquid waste to the course of the river without any treatment and it becomes disastrous to the farmers“ cattle living surrounding industrial zones. Some factories also emit smoke and bad

smells. For instance, the smell from the two abattoirs, cosmetics factories and the like is causing a health problem on the people living around the manufacturing. Others factories release polluted air into the environment while the rest affect the sound waves in the urban environment.

Some farmers living in the area called „Teche“ and „Malka Gafarsa“ inhabiting around the bank of the river „Laga Robi“ used the polluted water for irrigation and they cultivate fruits using this untreated river water. Even without measuring the intensity of pollutants in the water, one can simply judge how much the water is polluted by looking at the color of the river.

There is no appropriate waste disposal site in the city which has exacerbated the problem. The existing temporary waste disposal site is located near the residential areas, and is not in the safe condition and also subjected to environmental problems as it is located near the course of river „Robi“. Indeed, the waste disposal site in Leku Kata Kebele is the only waste disposal site of the city which collects the waste coming out of the whole households and factories in the city. This waste disposal site is neither well selected nor capable. Since the site is located near the residential area, the inhabitants have been complaining about the location of the Leku Kata waste disposal site.

In another registry, Cosmetic industries in the city of Burayou are also affecting the health of the local residents. These factories are also located nearby the residential sites; it has been unclear how these factories were planted amidst of residential land use zone. Moreover food processing industries discharge harmful chemicals to the rivers in the city of Burayou. The effect of these harmful chemicals on human beings and animals has been witnessed. Nonetheless, the protection of industrial pollution and the environmental management cannot be addressed by a single urban local government. Rather, the multiple levels: Federal, regional and urban local governments have roles to play in protecting the environment. In this light, this study not only explores the effects of industrial pollution in the city of Burayou but also it examines the competence and the responsibilities of the three levels of government in protecting the urban environment from the industrial pollution.

## **1.2. Objectives of the study**

### **1. General Objective**

The general objective of this study is to evaluate environmental policy and examine its implementation in the city of Burayou.

### **2. Specific Objectives**

The specific objectives of this study are:

1. To assess the competencies of urban, regional and federal governments on environmental matters
2. To examine the multilevel environmental sectors coordination for implementing environmental policy.
3. To analyze the costs of industrial pollution in the city of Burayou.
4. To analyze the implementation of EIA by the industries in the city of Burayou.
5. To forward alternative solutions to address the problem of industrial pollution in the rapidly urbanizing cities like Burayou.

## **1.3. The Research Questions**

The basic research questions of this thesis include:

1. Are the legal and institutional frameworks adequate for implementing the environmental policies in the Ethiopian federation?
2. What are the competencies of the three levels of government in relation to the environmental protection? To what extent can the urban local administration address the industrial pollution?
3. What are the major factors contributing to industrial pollution in the case of Burayou city? What are the impacts of industrial pollution on the local community?
4. Do the capacities of environmental sectors match the functional responsibilities to implement the environmental policy?
5. Do the factories in the city fully implement the environmental impact assessment?

#### **1.4. Scope of the study**

The scope of this study is limited to the study of the industrial pollution in the case of Burayu city administration. Hence, the research focuses on the causes of industrial pollution, competencies of the Federal, regional, and the role of the city administration. It also focuses on the performance of the environmental sectors and on policy frameworks in relation to environmental protection. Specifically, the focus of this research will be on water and air pollution and it intended to deal with food processing and cosmetics industries in the city of Burayou as well as solid waste disposal site of the city; the research analyzes both the legal and practical aspect of environmental (industrial pollution) at the urban local level.

#### **1.5. Significance of the Study**

Because of the existing problem at the ground which is affecting the local community and the researcher own proximity, because he has been working in the area and familiar to the problem under study this study got attention of the researcher. Unlike other studies in the area of industrial pollution this research do not study the mere problem of industrial pollution, it studies the issues at multilateral scale. The study addressed the responsibility of the three level of government from legal perspectives and analyzed the responsible bodies of each in practice. The study examined the bottle necks which hindered the implementation of environmental policy. Hence, this research has brought fresh insights and recommendations for policy makers and that also provokes further research on the problem or related issues.

#### **1.6. Limitation of the Study**

In the process of the study the researcher faced some difficulties. There was time constraints for carrying out wider multilateral research because the issue of environmental protection is not managed at single level of government; and to get relevant data the researcher had to reach all levels of government which needed much time. Also, some factories were not volunteer to give appropriate data for the researcher; and those who gave the available data took longer time. At federal level it was also difficult to get complied and appropriate data. Consequently, the researcher is forced to find data from different units. That is again consumed much of the research time. The insecurity due to the protests was another hardship that the researcher faced while on the field of investigation in the city of Burayou. This has made the participants of the

research unstable and transportation routes difficult to reach out to the target group of the research. There were also financial constraints and lack of previous experience in undertaking research of any sort.

### **1.7. Some Descriptions about the Study Area**

Burayou is one of the cities which remarkably show fastest development under Oromia regional state. The city is located to the west of Addis, along Addis Ababa –Ambo- Wallega road at a distance of 10 km from the center of Addis Ababa (Piazza). The city is neighbored by Addis Ababa city in the East, Sebeta Hawas Woreda in the south, Welmera Woreda in the west, Sululta city and Sululta Woreda in the North. The city comprises 90.57km<sup>2</sup> and has more than 15km boundaries with Addis Ababa. According to some elders, Burayou city was founded in 1938 by “Grazmach Robi Kelecha” who was a landlord of the area and who distributed plot under a lease of 10birr/100m<sup>2</sup> per year to people who wanted to build houses for residential and other activities (from communication office of the city). The name Burayou was brought from one of the indigenous trees of the area. The word Burayou means is an Afan Oromo term which means in Amharic “tikur inchet” which is literally called black wood (Culture and Tourism office of the city).

With regard to its administration, during the imperial era, it was under the administration of “Menagesha Awuraja” of “Showa Kiflager” with no status of town administration. Then, during the Derg time, it was governed under two administrative structures: the urban dwellers association and peasant association. Until 1991 it was under Welmera Woreda of West Shoa Zonal administration organized under single kebele. In 1996, the town was established to the level of municipality comprising only the area of Keta and Gefersa with a very limited power of service delivery. Then in 2005, it became a third grade city and reformed to be administered by municipality. In 2006, it becomes the first grade city. Now a day, the city ranked as “leading city” and organized into 6 Kebeles namely: Gefersa Burayou, Burayou Keta, Leku Keta, Gefersa Guje, Gefersa Nono and Melka Gefersa. Because of the increasing population of the city and to facilitate service delivery of the city, the structural study to create additional structure, that is Sub-city is accomplished and starting from next year the city structural arrangements will increase by one level since there will be four Sub city in the city (communication office of the city).

The city is characterized by unexpected fast population growth which is resulted from high urban rural migration and natural population increase. Recently, there is also a high population movement from Addis Ababa towards Burayou city. According to the Census results of population, in 1984 the population size of the town was 4138, in 1994 it reached 10,027 and by 2007 population census it reached 63, 873. Now the population size of the city is estimated to be above 200,000 (communication office of the city).

With respect to social services, in 2016, there were 148 private and 13 government Schools including 87 kindergartens, 66 primary schools (1-8), 4 secondary schools (9-10) and 3 preparatory (11-12) School, 2 colleges(1 private, 1 government) providing educational Services in Burayou city. Concerning health services, in 2016, 2 health centers, 36 clinics, 23 pharmacy total 63 government health institutions and the privately owned health institutions were provided health services (Communication office).

Concerning financial institutions, currently, there are about 9 financial institutions in Burayou city, namely: Oromia Co-operative Bank, Hibret Bank, Awash Bank, Oromia International Bank, Buna Bank, Birhan Bank, Absniya Bank, Development Bank and Commercial Bank of Ethiopia. Since it is nearer to the capital city, the city is one of the major investment areas in Oromiya Region. According to information from investment office, there are 780 investment projects which are licensed in the city and 444 projects started production which created job opportunities for more than 23,000 citizens. The city has also established industrial zone in “tatek” in areas of former military camp.

With regard to revenue collection practice of the city, the annual revenue collection of the municipal has grown from 5.9 million birr in 2005 to 201.1 million birr in 2016. Similarly, the state revenue increased from 2.8 million in 2005 to 128.9 million in 2016(Revenue authorities of the city).

The natural scene of the surrounding areas, the nearby Suba natural forest, Melka Atete Irecha Ceremony, Kale Forest, Gefresa Water dam 1 and 2 and Guje’s Field area are the most important tourists’ attraction sites in and around the town.

## **1.8. Methods of Research**

### **1.8.1. Methodological Approach of the Study**

Because of the problem under the study and in order to attain the objective of the study the researcher used mixed research approach. Thus, the study incorporated both qualitative and quantitative approaches. In the process of the study both closed and open ended questions has been used by the researcher and other qualitative approaches were carried out. This approach helped the researcher to get more representative and detailed data than a single approach to the study. As Creswell (2014: 32) stated “the core assumption of this form of inquiry is that the combination of qualitative and quantitative approaches provides a more complete understanding of research problem than either approach alone”. The research data were gathered through both quantitative and qualitative instruments and it is reported both in words and numbers/percents.

### **1.8.2. Data sources**

In order to achieve the objective of the study, both primary and secondary sources have been used in the process of gathering information. The primary sources of information for this study were key informants including experts of environment and government officials who have higher position in Oromia regional state environmental Authority, at Federal environment, forest and climate change ministry, and Burayu city administration as well as respondents from the public. To enrich the data from primary sources available secondary data has been referred from different books and literature dealing with the problem under the study.

## **1.9. Data Collection Instruments**

To collect data from informants the researcher used the following data collection instruments.

### **1.9.1. Questionnaires**

The researcher used both open and closed ended questionnaires as one of the instrument for data collection. In this process both qualitative and quantitative data have been collected from the victims of the industrial pollution. The questionnaires were administered through careful area clustering of the population and taking a Sample by random Selection. As a result, the researcher managed to collect the data from 167 victims in the city.

### **1.9.2. Key-Informant interview**

This method is very important to get relevant, rich and detailed information from well informed bodies that have an experience on the issues under the study. In this research key informants were experts and government officials which are relevance for the issues under investigation. Thus, this method helped the researcher to get valuable information about responsibilities of Federal, regional state and the local government in protecting the environment from industrial pollution and help to understand the gap of these three levels of government.

Generally 13 key informants have been contacted during the process of the study. At the local government level the research made key informant interviews with 5 key informants. The 2 key informants were experts of environment authority of Burayou city administration and the rest key informants at the city level were head of the environmental authority of the city, head of office of Mayor and house speaker of the city council. At the regional level the researcher contacted 4 key informants (Deputy Director of the authority, the climate change Director and two experts of regional EIA). The rest key informants were from the Ministry of Environment, Forest and Climate Change). These key informants were the Director General of policy and legal Directorate, the Director General of EIA Directorate, the Director General of Plan and Financial Directorate and the expert of EIA. There were also interviews with five factory managers at the factory level in the city of Burayou.

### **1.9.3. Focused Group Discussion**

Focused group discussion is used to supplement the data that is obtained from key informant interview and questionnaire. It also helps to get additional information which couldn't be accessed in key informant interview and questionnaire. In general, one focus group discussion was carried out at the city level during the process of the study with 6 relevant experts of environmental stake holder sectors. The experts who were participant of the discussion were from office of Health, workers and social affairs, Environment, Municipality, city council and Investment. The discussion was carried out at the city level in office environmental authority by the local language (i.e. Afan Oromo) and facilitated by the researcher himself.

#### **1.9.4. Observation**

This method helped the researcher to have a deep insight about the problem at local level. In the process of the study to know the extent of industrial pollution the researcher made an observation on different parts of the city.

#### **1.9.5. Document Review**

Secondary sources of information were used by the researcher to supplement the primary data. Secondary data involving review of related literature including scholar's articles; books; journals especially the Ethiopian Environmental laws and policies were reviewed to understand the legal status of environmental protection. In addition, the researcher accessed the constitutional provision of environmental protection.

#### **1.10. Sampling Procedures and Site selection**

In the course of the study the researcher used random and purposive sampling procedures. The informants have been selected by using both random and purposive sampling. Thus, by using this technique, the researcher selected 167 respondents of questionnaire through simple random sampling. In other hand, 13 key informants and 6 group discussants and 5 informant interviews from factories were selected by purposive sampling technique. The respondents who were selected from the victims/societies were from the areas where the impact of industrial pollution is very serious. Laku Keta, Burayou Keta, Gefersa Burayou and Gefersa Nono were the kebeles where the respondents from the victims were selected.

During the data collection process survey was carried out to have data of potential victims to manage the data gathering process. As a result, 2371 potential victims (1122 from Leku Keta, 284 from Burayou Keta, 469 from Gefersa Burayou and 426 from Gefersa Nono) were identified by the survey.

Then according to Kothari (2004), the researcher determined the sample size for populations by 93 percent level of confidence and 0.7 errors.

According to Kothari (2004) if  $n = \frac{z^2 \times p \times q}{d^2}$

n= desired sample size

z=standard normal variable at the required confidence level

p=estimated characteristics of target population

d=level of statistical significance of target population

z = 1.81(critical value for 93 percent confidential level) p=0.5 q = 1-p = 0.5 d = 0.07 (in which 93 percent accuracy is assumed)

$$\text{Therefore, } n = \frac{z^2 \times p \times q}{d^2} = \frac{(1.81^2 \times 0.5 \times 0.5)}{0.07^2} = 167$$

To determine the sample household size in each Kebele, the following statistical formula is applied i.e.

$$Nshhs = \frac{Nkhhs \times SS}{Thhs}$$

Thhs

Where, Nshhs= Number of sample households

Nkhhs= Number of kebele households

SS=Sample Size

Thhs =Total household

**Table 1.1: Sample Households Selected from each Kebele in the City of Burayou**

No.	Selected Kebeles	Target HHs	Sample HHs	Method of selection
1	Leku Keta	1122	1122 /2371*167=79	Simple random sampling
2	Burayou Keta	284	284/2371*167=20	Simple random sampling
3	Gefersa Burayou	469	469 /2371*167=33	Simple random sampling
4	Gefersa Nono	426	426/2371*167=30	Simple random sampling
Total	Total households	2371	167	

Therefore, as it is observed in the above table the total sample size is 167 households.

**Table 1.2. Demographic characteristics of respondents**

	Frequency	Percent
<b>Sex</b>		
Male	104	64.2
Female	58	35.8
Total	162	100
<b>Age</b>		
15-29	44	27.2
30-49	81	50
50-64	26	16
64 and above	11	6.5
Total	162	100
<b>Occupation</b>		
Government	50	30.9
Farmer	21	12.9
Others	91	56.2
Total	162	100
<b>Education</b>		
Masters	21	13
Degree	23	14.2
Diploma	59	36.4
Certificate	13	8
Others	46	28.4
Total	162	100
<b>Kebele's of respondent</b>		
Gefersa Nono	30	18.5
Gefersa Burayou	33	20.4
Burayou Keta	20	12.3
Leku Keta	79	48.8
Total	162	100

Source: Field Survey, 2018

### **1.11. Data Analysis**

Data which were generated from the respondents of questionnaire, key informant interviews and focused group discussion were analyzed through careful organization of the data and interpretation of meanings. Contents are summarized in relation to the problem under investigation. Since most of the data were collected using Afan Oromo at local level, it has been carefully translated in to English by the researcher. In this situation, the researcher tried to maintain its originality and clarity of information while translating from Afan Oromo to English. The data which were collected from the respondents using questionnaire are also analyzed by using descriptive statistics.

### **1.12. Organization of the Thesis**

This thesis is organized into five chapters. The first chapter is the introduction to the study. The second chapter dealt with the review of related literatures. The third chapter dwells on the environmental policy, legal frameworks and institutional frameworks of Ethiopia. The fourth chapter is devoted to the empirical analysis of the implementation of environmental policy in the case of the city of Burayou, Oromia. The last chapter provides concluding remarks and possible recommendations that come of the inquiry.

## CHAPTER TWO

### CONCEPTUAL AND THEORETICAL FRAMEWORKS

#### **Introduction**

Environmental federalism becomes one of the critical issues in the federal system. There is no common agreement on the environmental federalism with respect to which levels of government effectively formulate and implement environmental policies. In this regard, there are arguments which support environmental centralization and decentralization respectively.

The aim of this chapter is to provide definitional concepts of environmental federalism, debate on environmental federalism presenting arguments on centralization and decentralization, experience of two federations: USA and Brazil in environmental federalism. This chapter also discusses on the environmental impact assessment with its significance, principles and processes and procedures. It also discusses on the role of public participation in environmental decision making.

#### **2.1. Environmental Federalism**

In a Federal system obviously, different activities are shared between Federal, regional government and local governments based on the tiers of government existing in the Federation. With respect to environmental issue, legislation over environment is shared between the federal, state and local governments (N. Belbase, 2010: 1). It is common that the word environmental federalism is misused as it emphasizes the role of the federal government in enacting environmental policies and states are the implementers of the policies. However, environmental federalism should be understood as it is the study of “normative and positive consequence” of shared responsibilities of the federal and sub national governments in managing environmental harms (Shobe and Burtraw, 2012:3).

It is difficult to get the model of federalism that matches with environmental federalism. Even in most decentralized federations the environmental activities are highly centralized. For example, Switzerland is one of the highly decentralized federations. However, it is highly centralized in terms of environmental issues (Dafflon and Madies, 2011:8). In contrast, some unitary states may have highly decentralized environmental powers than the federal state. For instance, China which is unitary state is highly decentralized than USA in terms of decentralization of

environment even if there is no improvement of environmental activities at the local level in China (H. Zhao and R. Percival, 2017).

There have been different perspectives for understanding and for the better management of the environment in a federal setting. In general, there is no a common agreement over issues of Environmental Federalism with regard to which theory of Environmental Federalism is more appropriate for the better protection and management of the environment. The subsequent section dwells on these views and evaluates which of these theories could be justifiable for multi national federations like Ethiopia.

## **2.2. Debate on Environmental Power: Decentralized or Centralized?**

Environmental functions in the Federal system, involves all level of governments existing in the Federation. As Oates (2011:1), stated “environmental policy making typically takes place in the context of a system with several level of governments. And this raises the important issue of the appropriate role of the various governments in the setting of environmental standards, the design of regulatory measures to attain the standards and the monitoring and enforcement of these measures”.

With regard to powers over the environmental issues some theories argued that the environmental power should be centralized. Others argued that the environmental power should be decentralized. In this regard; different arguments which favor centralization and decentralization of environmental standards go side by side. Generally, in this section the researcher tried to present both views side by side and finally present alternatives which are more useful for Ethiopia.

### **2.2.1. Arguments for Centralized Environmental Jurisdiction**

The proponents of centralization argued that decentralizing environmental standard to the local government brings destructive outcome. It is resulted in what is known as „race to the bottom“ and „local spillover effect“. Others also argued that since the local governments do not have adequate experts decentralizing environmental standard could not bring intended environmental outcome (Esty, 1996, Oates 2001).

### ***Race to the bottom***

Different scholars argued that decentralizing environmental standard may lead to resource mobility since local government computed to attract capitals from other jurisdictions. These authors argue that “race to the bottom” will be resulted in mobility of capital and labor from one jurisdiction to the other jurisdiction. These centralists argued that there is a meaning full effect of environmental standard on location of industries (Esty, 1996). As Henderson(1996) cited in Millamet(2013:8-9), the study on the effect of stringent environmental regulation imposed in non-attainment counties in USA, indicate that counties in “attainment stage” contain 7-10% more increment of plants than other counties which are under circumstances of “non-attainment” of environmental standard. As Mallimet (2013: 9 ), also cited Greenstone (2002) “over the period 1972-1987, nonattainment counties (relative to in attainment counties) lost roughly 600,000 jobs, \$37 billion in capital stock, and \$75 billion in output in 1987”. Esty (1996) also argued that jurisdiction may compute for economic benefit at the decentralized system at the cost of the environment as the decentralized government formulate weak environmental standard to attract business and job opportunity which is resulted in capital and labor flows because of the lowest cost of cleaning pollution.

### ***Local Spillover effects***

Different authors argued that decentralizing environmental standard can be resulted in local spillover effects. They argued that the local governments do not bother about their policy effects on neighboring jurisdictions. In this regard, M. Roesler (2015:1115) stated that “States sometimes have good reasons to preempt local laws. Local governments are not likely to consider the extraterritorial effects of legal measures”.

In other hand, Smith etal (1997) stated that it is difficult to control spillover effects at the local level. For instance, controlling air pollution in one jurisdiction depends on activities of industries in the jurisdiction and decision of plants outside the region. Oates (2001) also argued for the need of differentiation in taxation on the pollution sources and recommended specific subsidy to local government to carry out the issue under consideration. To this end ibid, (2001:5) stated that “the central government must either specify some set of differentiated taxes directly on polluting

sources across the nation, or offer an appropriate and differentiated subsidy to local governments to induce them to internalize the inter-jurisdictional benefits from pollution control”.

Oates (2001) also argued that even during the case of spillover effect looking the direction of pollution flow is important. In this regard he stated that if the flow is unidirectional it may be difficult to resolve the problem through intergovernmental relation in this regard central intervention is quite important even if it doesn't bring efficiency. According to Oates, compensation is important for the source of pollution to reduce the flow of pollution or centralized environmental standard is quit important if not possible. However, if the pollution flows in opposite direction, there is no need to centralize environmental standard rather the jurisdictions will gain mutual benefit from decreasing the extent of pollution in their jurisdiction, in this context intergovernmental relation is important. In this regard, Esty (1996) also argued that in case of spillover effect when the direction of pollution flow is unidirectional it is very difficult to solve the problem through collaboration between jurisdiction at decentralized system rather it needs central interference in this respect.

When the environmental issue is related with Trans -boundary pollution, which is beyond the boarder of the jurisdiction, it affects other jurisdiction nearer to the source and it may affect all parts of the world. In this case, jurisdiction from which pollution is released does not care about its impacts on other areas. Thus decentralizing the issue does not bring the solution for the environmental problem. This needs joint international efforts to prevent trans- boundary pollution (B.Seveyn and S.Proost, 2006:51).

The other argument which is raised by centralist is related with the future generation. Centralists argued that the decision of the local government does not address the needs of the future generation. According to them, since the modern world is characterized by mobile community they do not have any care for future generation. However, some others argue that today's mobile community will have destination in some area or their children may live in specific area and there are also public pressures which secure the environment even for future generation (Oates, 2001: 9-10)

In general, when the pollution of one jurisdiction spill over other jurisdictions it needs the central government intervention to set standard. Since the jurisdiction could not control the existing

pollution outside its locality, it needs the higher level of government to set standard, in this case even it needs „supra“ national institutions to control free riding (S. Dalmazone, 2006:4)

### ***Lack of Adequate Human Power at Local Level***

Another argument of the centralist viewers with regard to environmental standard setting is related with the notion that environmental issue is complex and it needs skilled man power, in which the local governments do not have such capacity, but the central government can employ highly qualified professionals (Esty, 1996). That is why Esty (1996) argue that it is difficult to decentralize environmental powers to the local level of government, and local governments often lack capacity to collect scientific environmental information and ensure environmental quality.

Nonetheless, scholars like Oates (2001) argue that the central government should have to give guidance and information to the local government without centralizing the environmental standard altogether. Notably, he emphasizes that there are ample researches done depicting the management capacities of state and local governments in environmental issues. Hence, there is now considerable expertise at decentralized levels of government, when seen against the background of centrally provided support on environmental matters.

With regard to scientific research and diffusion of information S. Dalmazone (2006:8) also stated, according to different environmental federalism literatures, in addition to standard setting the invention and dissemination of scientific information is the responsibility of the federal government since the federal government has adequate experts at its disposal.

### **2.2.2. Arguments for Environmental Decentralization**

Different authors argued on the issue of decentralizing environmental standards. They argued that decentralizing environmental standard enhances democratic participation of the community at the local level. In this line Mallimet (2013: 34), stated that decentralization is supported because of great public participation at the local level. Other scholars also argued that since the environmental pollution problems cross jurisdiction matters, decentralizing environmental standard help the local governments to respond to their own circumstances and also help to respond to their public preferences. As Mallimet (2013:12), cited Adler (2005:138) “localized control of environmental policy will produce environmental measures that are more likely to reflect the preferences and needs of those who will be most affected by them.” It helps the local

governments to formulate cost effective environmental standards. In this respect, Oates (2001:21-22) also argued that when the cost of environmental treatment vary across localities uniform standard will be resulted in high treatment cost compared to decentralized one. Oates (1997), also argued that if pollution control costs or preferences vary across jurisdictions decentralization is preferable than uniform policy formulated at the center.

Decentralization also helps for policy innovation. It enhances the notion of “laboratory Federalism” (learning by doing), in which states and local governments have a chance to formulate policies for practices of environmental quality improvement (Oates 2001). As the proponents argue, decentralizing environmental standard is also helpful for horizontal policy innovation. In this regard, Mallimet (2013:36) stated that “laboratory, or horizontal, federalism refers to policy replication by other sub-national governments once one sub-national government discovers a “successful” policy”. Likewise, others believed that being closer to the people, the environmental activity is subjected to public control and help the public to put pressure on environmental agencies for better environmental performance (Oates, 2001). In this regard, M. Roesler (2015, p, 1116) also stated that “dynamic federalism strongly supports federal empowerment of local authority, particularly when federal empowerment will enable local governments to adopt more stringent environmental protections than state or federal law”.

Environmental scientists, who favor decentralization of environmental standard, also argued that the decision which is made at the central level of government is far from public participation and sacrifices the self-governance of environmental issue at the local level than decisions at the local level. Decentralization decreases the fear that the public representatives may not stand for the will of the public at the local level (Esty, 1996:609-610). Esty (1996: 617-624) also argued that environmental problems that are geographically vary: for instance, the clearance of toxic waste dump which needs local knowledge about the detail of the problem with its solution and insuring drinking water quality needs decentralization as they vary across jurisdiction and its cost also differ from one locality to the other. Similarly, with regard to implementation of environmental policy Esty(1996), argued that decentralization of environmental implementation brings effectiveness as the local governments know their circumstance and draw appropriate mechanism of implementation based on their local circumstance.

In response to the view of „race to the bottom“, Oates (2001) analyzed empirical literature about the USA environmental air quality before and after 1970s. In this regard, between 1958 and 1970, there were significant improvements of air quality in major cities in different environmental aspects. There were a reduction of emission and concentration of carbon dioxide in different states of United States. There were 82 local air pollution programs in USA in this period and in 1967 California introduced vehicle emission standard which shows improvements from state sides in reducing environmental pollution. However, in 1970s under the clean air act uniform standard of air quality were started and there are also some improvements in air quality. According to Oates, the activity of states and local governments before 1970s does not show the race to the bottom and does not justify the cause for federal intervention because there were significance improvements in air quality. However, the Federal government of USA introduced more stringent environmental standard which is difficult to be achieved by the states. This stringent standard is unable for many states to achieve for more than 30 years. As the author argued, this does not provide race to bottom rather benefits from air pollution control has exceeded the total cost in USA that is why the states unable to achieve this standard.

There are cases where states in USA formulated stringent standard than federal standard. In the case of Hazardous wastes states in USA formulated environmental quality standard more stringent than the federal government which is opposite to the notion of “race to the bottom” (Oates, 2001). B. Seveyn and S. Proost (2006:50) also stated that “more recent economic literature, however, shows that this race-to-the-bottom does not necessarily happen”.

With regard to labor mobility, the effect is only related to highly pollutant industries, for other non-pollutant industries environmental costs are too small and the choice over location of industries is determined by other factors. In this regard, the centralists show the impact of stringent environmental standard considering „other things being held constant“ or similar. In practice, different factors such as physical and human resource determine location of firms (Mallimet, 2013:12). The second generation environmental research group argued that there is no relationship between environmental standard and firm location. As Oates (2001:16) cited (Mac Connell and Schwab, 1990) difference in environmental standard has no influence on location of the industries branch.

Some proponents of decentralization argued that decentralization of environmental standard can be resulted in reduction in corruption. In other hand, opponents of decentralization argued that since there is vertical externality there will be higher corruption. In this regard, the argument does not make sense at which level of government corruption is high. It is policy making at multi-level of governments which may resulted in greater corruption. No research has been done which level of government is more corrupted than the other (Mallimet, 2013).

With regard to spillover effects, centralization is not the only option to resolve the problem of spill over pollution between jurisdictions, negotiation between the jurisdictions can resolve the existing spillover effect problems. So prioritizing centralization in this regard does not bring efficiency in environmental protection rather seeing negotiation as an option can bring efficiency (Oates, 2001:5).

In general, the second generation of environmental researchers argued that the role of the federal government in the environmental aspect should be conducting research and providing information which help the regional state and local governments to formulate policies which feet their own circumstance. They argued that the central government should provide “a menu of standards” for the regional states so that the regional states have an option to select out of the given menus and formulate their own policy standards. The Federal government should have to involve where setting standard of pollution control is cost saving and serve for nationwide (Oates, 2001).

### **2.2.3. Balance of Centralization and Decentralization in Environmental Decision Making**

The third perspective in environmental decision making is mixing both centralization and decentralization according to the existing condition at the ground. According to Esty (1996:614), some environmental issues such as local waste sites needs local information and local decision making as it differ across localities. Other environmental issues such as air quality need centralized decision making. As a result, using both centralized and decentralized environmental decision making is important to solve the existing problems according to its specific condition.

In general, no much is written on the division of environmental competencies between tiers of governments in federal system. The division of environmental powers between levels of governments brings accountability in the performance of environmental practice. As H.Adler

(2005:177-178) argues this helps the states and local governments to design its own choice on the way of environmental protection and help the federal governments to focus on issues of spillover effects and economy of scales.

Oates (2001), also argued that if the environmental issues are pure public good, which affect a nation as a whole centralizing it is quite important, if it is local public good and if the environmental quality depends only on the emission of that specific jurisdiction for example, local drinking water, collection and disposal of waste and etc, it should be decentralized. If the environmental pollution has local spillover effects inter jurisdictional cooperation is quite important and if not possible centralization is quite important.

The author of this thesis argues that the division of competencies between the levels of governments will bring efficiency and accountability in the matter of environmental protection. The federal government should play a role in environmental protection such as on the matters of economic of scales such as scientific research and collection of relevance data on environmental matters which serve all states and local governments decisions on the issue of environmental protection. The federal government also should have to play significant role on the issues of environmental matters which has spillover effects. As to me the federal government should adequately involve the states and local governments, public and other stake holders while setting policies and standards at the federal level. In addition, the federal, state and local governments should participate in collaboration both in the environmental policy making and implementation. The environmental policy, regulation and standard should address the needs of the local governments and the local public.

So mere centralization or decentralization could not bring effectiveness in the environmental protection activities rather all level of governments should have to play a role in the environmental protection. The environmental protection and management needs the involvement of all levels of governments. As Esty (1996:14), stated “because of the diversity of environmental harms that governments seek to regulate, a mix of decentralized and centralized, governmental and nongovernmental problem-identification structures is likely to be useful”.

In general, environmental problems that are local in its dimension (such as waste site preparation and management and drinking water quality) should be regulated and implemented at the local

level. Problems which are wider and which could not be controlled at the local level (such as controlling river pollution) which flows across different states should be managed at the national level. Even, the international effort is required when the environmental problem is beyond the national control (Esty, 1996:648). Collaboration and intergovernmental relation is important for better environmental protection in multi-national federations like Ethiopia.

### **2.3. Environmental Policy Formulation and Implementation in Federations**

Allocation of powers in the implementation of environmental activities is different across different federations. Some federations give prescription over activities which should be done at the local level without any loop whole for local government to add in it. Contrary to this, some federations formulate general frame work of the environmental activity which gives a chance to local government to adopt according to their own circumstance in line with the central frame work (S. Dalmazone, 2005:7).

This research takes the experience of two federations: USA and Brazil. The reason why these two federations are taken in this research is that both the two federations have good experience in environmental federalism. USA has a long history in environmental federalism and it passes different stages in environmental federalism- highly decentralized, centralized and Cooperative environmental federalism. Brazil's experience is also taken because the constitution gives mandate of protecting environment for all levels of government (federal, states and municipalities). In addition, Brazil has a serious problem in environmental protection, its cities are very affected by industrial pollution and there is also a good progress in Brazil to manage municipal solid wastes that is why the experience of this federation is needed.

#### **2.3.1. Experiences of USA**

##### ***2.3.1.1. Features of US Environmental policy***

Before 1960s environmental protection in USA was largely considered as a power of local and states governments. In 1950s many cities in USA enacted air pollution control programs to prevent the environment from air pollution. However, the Urban and States initiatives were seen in efficient to curve the environmental problem and resulted in establishment of Federal Environmental Agency (Kraemer and Schreurs, 2007:35). Thus environmental movement of 1906s and 1970s is also resulted in centralized environmental policy making in USA. By mid of 1970s federal environmental standard has been established for air and water pollution. This

centralized policy making in USA is the result of pressure from environmental activists who believed that the federal environmental regulation is more successful than states environmental regulation. Despite the fact that centralization of environmental policy is clearly able to be seen, states in USA continued to be center for policy innovation. In many cases, new areas of environmental policies were first regulated by the state and followed by the federal government regulation. Even in some policy areas states regulations remain strict than the central government (D. Vogel, etal, 2010:1-2).

USA has no coordinated collection of environmental policy rather the environmental policies of USA were enacted in different historical periods for different purposes. Some of these environmental policies are: the 1969 national environmental policy act, the 1970 clean air act, the 1972 clean water act, the 1974 safe drinking water act, the 1973 endangered species act, the 1976 resource conservation and recovery act, the 1976 toxic substance control act, the 1980 compressive environmental response, compensation and liability act, the 1986 emergency planning and right to know act, the 1990 pollution prevention act, the 1990 Oil pollution act, the 1910 federal insecticide, fungicide and rodenticide (Kraemer and Schreurs, 2007, Kraft, 2011). The other feature of the 1960s US environmental policy was the introduction of EIA to protect the environment from the growing pollution in the United States (Jay et al, 2007: 288-89).

In USA Environmental laws are enacted and environmental programs are managed at all levels of governments. For instance, clean air, clean water and management of hazardous wastes are at federal level. States enact laws which are consistent with federal standard that designed to address state's specific environmental problems. At the federal level even if environmental responsibilities are divided between different sectors the main responsibilities of environmental protection is given to US Environmental Protection Agency. Environmental Protection Agency administers several environmental laws. In addition most environmental researches are carried out at the federal level supported by academic institutions and private researchers (S. Laskowski, 2005:1-2).

### **2.3.1.2. The State of Environment in USA**

#### ***Air Quality***

With regard to air quality, US policy on air quality goes back to the late 19<sup>th</sup> c when cities such as Chicago, New York, and Pittsburgh began to regulate smoke emission. Current efforts to bring national air quality began in 1970s with amendments of clean air act which focus on human health and national standard for protection. Following the clean air act, the US EPA categorized various contributors for air pollution into four: *stationary sources (e.g., factories, power plants, and smelters)*, *area sources (e.g., smaller stationary sources such as dry cleaners and degreasing operations)*, *mobile sources (e.g., cars, buses, planes, trucks, and trains)*, and *natural sources (e.g., windblown dust and volcanic eruptions)*. The clean air act also gave mandate to EPA to set national air quality standard for six pollutants which are called ‚criteria‘ pollutants: *carbon monoxide (CO)*, *lead (Pb)*, *nitrogen dioxide (NO<sub>2</sub>)*, *ozone (O<sub>3</sub>)*, *particulate matter (PM)*, and *sulfur dioxide (SO<sub>2</sub>)*. Despite such efforts to improve air quality in USA, 116 million peoples in USA live in counties where air quality is unhealthy. Motor vehicle pollution, power generation and industrial facilities cause 30,000 deaths in a year in USA in which Cardio pulmonary disease such as asthma highly affects elders and children and annually hundred thousands of US citizens have been affected by asthma (Kraft, 2011:61-65)

#### ***Water Quality***

Before 1972 there was a problem of water quality in USA, the quality of water was deteriorated by organic wastes. Because of this problem the federal government enacted clean water act of 1972. Since the enactment of water quality act there has been a decline in the discharge of toxic organic pollutants and toxic metals from the factories. However, despite such improvement water quality remains a problem in USA. Information on water quality is collected by the states. However, states do not address all water bodies within their jurisdiction (Kraft, 2011: 69-73). Generally, the clean water act makes illegal the discharge of pollutant into movable water unless permit is given by the concerned body (European Union, 2015:10).

With regard to realizing toxic chemicals to water bodies manufacturers shall report to the USA EPA and to the states about the state of toxic chemicals. US EPA has data base of each pollutant

industry and releases the information annually on its website. This information helps state and local governments to put pressure on pollutant industries (Kraft, 2011:75-80).

### ***Municipal waste management in USA***

The regulation of municipal waste is highly decentralized in USA. The role of federal government in this regard is very little and policies in this regard have been initiated at the local level. As a result, there are disparities in the management of municipal wastes among the US states. States and local governments used different mechanisms to handle municipal solid wastes in the United States. They used “deposit refund schemes”, minimum requirement of recycling materials, engage communities in recycling programs and banning of the production of non-recycled materials. This helps the municipalities to decrease burdens on the landfills (D. Vogel, etal, 2010:14). As D. Vogel, etal, (2010:15) cited Dietly, 2001“all New Yorkers, 80 per cent of the Massachusetts population, and 70 per cent of Californians have access to curbside recycling”.

In addition to conventional wastes, millions of expired computers, monitors, printers, cell phones and other electronics devices that contain lead, mercury and other toxic substances have been disposed in USA. As EPA estimates 40 million computers becomes expired each year and 140 million cell phones has becomes useless each year. Recycling is also in an increasing rate in USA. For example, 99% car batteries, 54% of paper, 49% of aluminum beer and soda cans and 37% of soft drink bottles have been recycled. Many states and local governments in USA have recycling programs. For example, the city of Seattle uses economic incentives and citizen cooperation program to enhance recycling. The city used the program which is called “Volume-based recycling” or “pay as you throw” (Kraft, 2011)

European Union (2015: 11) also stated that “Resource Conservation and Recovery Act, banned all open dumping of waste, encouraged source reduction and recycling, and promoted the safe disposal of municipal waste”. Some states have tried to facilitate recycling by banning packaging which is difficult to recycle. Some states regulated some types of packaging to have some minimum of recycled materials to achieve minimum recycling rates (Vogel, etal, 2010:16)

### ***2.3.1.3. Environmental Structure in USA***

The USA EPA has a power for major environmental policies. In addition 12 cabinets have an important role in US environmental policy. Not only these bodies“ four departments have a

major responsibility for either to protect the environment or natural resources. These departments are: interior, agriculture, energy and state. In other hand, Commerce and transportation, Nuclear regulatory Commission, executive office of the president (the council of environmental quality, office of management and budget, council of economic advisors, office of science and technology), are the main stake holders in formulation and implementation of environmental policies in USA. With regard to coordinated implementation of environmental policies sometimes it becomes difficult for these sectors to implement the environmental program in coordinated manner. Lack of coordination between these stake holders impacted the environmental protection activities in USA. To solve the problem of coordination between these environmental sectors special department was created in white house (Kraft, 2011:142).

In USA the divisions of environmental powers are very fragmented across different entities. The Congress (Senate and House of Representatives) enacts environmental policies and makes serious formal and informal control over executives. The executive branch/ environmental protection sectors implement environmental policies. Each house has ten committees which deal with the environmental issues. In House of Peoples Representatives the most known committee: energy and commerce committee (is responsible for air, drinking water, noise, radiation, solid waste and toxics), transportation and infrastructure committee (responsible for water pollution, water resources and noise). In the senate the well-known committee : committee on environment and public works( responsible for air, drinking water, noise, nuclear energy, ocean dumping, outer continental shelf, research and development, solid waste, toxics and water (European Union, 2015: 7).

#### ***2.3.1.4. The Role of Judiciary in US Environmental Protection***

In USA the constitution, administrative rules, regulations, executive orders and policies are interpreted by the Court. This creates a real opportunity for environmental groups to put pressure on executives. The Court in USA helps the implementation of environmental policy in different ways. It put pressure on federal agencies for more enforcement of environmental laws and reviews an agency decision critically by setting standard for review (Kraft, 2011:145).In USA both groups present their case in environmental matters before court when they cannot agree in congress or executive agency (Kraft and Kamienieck, 2007, O’Leary, 1993, 2010) Cited in Kraft (2011).

For instance, in 1997 the US EPA introduced stringent standards for fine particulates and ozone supported by the white house under the leadership of Clinton. However, this decision was contested by industrial group known as American truck association. These opponents argued that EPA did not take into account the cost of the standard. The opponents also contested that the delegation given to EPA by the congress was not constitutionally supported. In February 2001, the US Supreme Court saw the case and decided that the EPA's action was right and aligned with the Clean Air Act. The court also said that the delegation which was given to EPA by the congress was right and constitutionally accepted. This decision marked a land mark victory for environmental groups over industrial groups (E. Kraft, 2011:146-47).

In general, the court is one of the strong institutions which favor environmental innovation of the state. As Kraemer and Schreurs, (2007: 45) stated "while California's status is unique within the federal system, other states are also finding innovative ways to respond to what they see as a leadership void in Washington. The courts have provided an important tool for states seeking greater federal leadership to demand policy changes in Washington".

#### ***2.3.1.5. The State of Environmental Federalism in USA***

Since 1960s and 1970s in USA environmental protection has been implemented within the frame work of cooperative Federalism. Under this cooperative Federalism frame work US congress enact environmental law, the federal government implements the law through national minimum standards and the states are given delegation to implement the program needed to achieve the national standard (ECOS, June 2017). Between 1960 and 1980 environmental laws and programs are more centralized in USA. During this period EPA had more professional environmental experts than regional states. As states becoming stronger, now a day many of them have more experts than EPA which leads to delegation of many federal environmental programs to the state (S. Laskowski, 2005: 3).

Recent dialogue was carried out to strength cooperative environmental Federalism in USA. Thus, the recent dialogue gave states an opportunity to develop the program to go beyond the national standard if states want to perform above the national standard. The 2017 national conversation is also resulted in reformation of environmental functions between the federal and states in USA (ECOS, June 2017).

As states in USA lacks budget for increasing federal imposed environmental mandates which resulted in opposition of unfunded mandates by states leads to the new face of cooperative environmental Federalism which restricted the federal government to impose unfunded mandates on states (Kraemer and Schreurs, 2007). According to M. Bhan(2013: 49-50) contrary to command and control strategies of 1970s and 1980s the environmental protection in USA is relied on cooperative mechanism engaging stakeholders and decision is made by consensus. Kraemer and Schreurs( 2007:39) also stated that “the federal government continues to establish broad policy goals, but then through the provision of grants allows the states and municipalities to develop and implement specific programs and policies, usually with some continued federal oversight role”. With regard to public private collaboration in the environmental protection of USA M. Bhan(2013:55) stated that “the private sector has helped lead the environmental agenda by engaging in self-regulation, voluntary initiatives, and exceeding the minimum compliance to improve environmental performance”.

During environmental planning the US EPA and state have planning partnerships. Every year, federal EPA and states jointly make planning and share information in priority setting of environmental programs. Partnership agreement is signed by EPA regional administrators and state environmental secretary every year. After the signature the plan is adjusted and carried out according to the circumstance of specific states (Laskowski et al, 2005:8).

With regard to principles of the new Cooperative Federalism of USA, there are four major principles which determine Cooperative environmental Federalism in USA. These principles are: The first principle is known as *neither EPA nor can the states are successful without a strong working relationship*. According to this principle both states and EPA have a common goal that is protecting human health and the environment. For effective implementation of this principle environmental council of states (ECOS) has an important role for resolving differences between states and EPA. National policies and regulations are formulated by consensus of many states, EPA, NGOs and other stake holders. If there is difference between states and EPA states have a right to appeal before court. However, most of the differences are resolved by negotiation. The second principle is known as *the nation benefits from national consistency in implementing environmental programs*. One of the reasons for enacting environmental standard is to ensure environmental protection throughout the country to improve consistency. To improve

consistency national pollution standard and national technology based emission standard have been established in USA. The third principle is termed *decisions are best made by those close to the environmental problem*. This principle is built on the notion that states have a proper authority and makes decisions that are consistent with national policy. So delegating the program is quite important assuming that states know the local environment, local stake holders, economic and social circumstance of the local governments than EPA. However, EPA should have adequate information about the state's decision and the decision should be consistent with the national standard. The fourth principle is termed *active stakeholder involvement and sharing of environmental data is encouraged*. This principle involves sharing adequate environmental information and actively involving stake holders in decision making. According to this principle EPA and states made information available on website. Environmental groups and other individuals can assess about pollutants and performances of EPA and states and have a right to add their analysis on this website. In other hand affected parties, NGOs and individuals can request public hearing, appeal permit decision, and seek judicial review (Laskowski et al, 2005:5-8).

With respect to IGR in environmental protection, in USA there are different horizontal IGRs which are established between US states to enhance environmental protection. To mention some of it: Conference of New England governors and eastern Canadian premiers was established in 1973 consisting of six new England states and five eastern Canadian provinces to strength their economic ties as well as environmental issues in the framework of sustainable development. The west Coast global Governors warming initiatives was established in 2003 by California, Oregon and Washington to reduce greenhouse gas emission. US mayor's climate protection agreement was signed in May 23/2007 by 522 Mayors of cities of USA agreed to reduce their contribution to Climate change (Kraemer and Schreurs, 2007:40-43. The Environmental Council of the States (ECOS), is also one of the IGR institution in USA, which is consists of state and territorial environmental agency leaders to improve the capacity of state environmental agencies to protect and improve human health and the environment (ECOS, June 2017).

In 1995 the US congress passed unfunded mandate act, to control environmental protection of the country through command and control system which brings tension between the center and the states. After 1990s states and federal governments established a new form of relationship in

environmental matters. This gives states a power to use federal environmental grants with the absence of direction from the center. In this respect, states which implemented environmental program have given more autonomy. The grant which is given to the states has been based on the performance of the states (D. Scheberle, 2005:72-75).

Since a decade the environmental protection of USA turned from centralized command approach to the public private partnership approach. Different industries in USA have established partnership with US Environmental Protection Agency. For instance, under „common sense initiative“ six different industrial sectors: computer and electronics, automobile, iron and steel, printing, metal and petroleum established partnership with Environmental Protection Agency for effective implementation of environmental protection programs. The main objective of this partnership is to provide efficient environmental strategies, to provide effective pollution control technologies, to develop stake holders“ participation, to establish clear, transparent reporting record keeping of industries. In addition to these six industrial sectors, EPA involves industries, local and state agency representatives, environmental NGOs to eliminate contradictory regulations on environmental protection (M. Bhan, 2013).

In general, Environmental Council of States and Government Accountability Office also played a major role in IGR between the federal government and the state governments in the implementation of environmental programs. Besides, there is also „capacity steering committee“ which maintains environmental cooperation between states and federal government. “Performance partnership agreements” also give an opportunity to states to have say on environmental planning and precedence setting. According to “performance partnership” the environmental programs which are performed by the states are based on the agreements between state leaders and EPA regional office. This improves states and federal government relation in environmental matters in bringing transparency and collaboration (D. Scheberle, 2005).

Table 2.1. Principles of the Roles and Functions of States and U.S. EPA in Cooperative Federalism (Source: ECOS, June 2017).

Principles of the States' Role and Function in Cooperative Federalism	Principles of the Federal Role and Function in Cooperative Federalism
1. States involve with the federal government in setting minimum national standard and in the implementation of environmental programs.	EPA lead setting the minimum national standard
2. Implement the federal environmental program when the federal government delegate to the states. The delegation can be returned to the federal government if the federal government failed to fund the states for its program and when the states failed to bring change in the environmental performance	EPA implements the program if the states failed to bring progress and when national legislation gives mandates of implementation to federal EPA.
3. States can determine the way to implement the national minimum standard based on their particular circumstances	EPA should involve states and other stake holders in setting minimum national standard
4. states should involve local, other stake holders and the community in the implementation of national standard, policies and programs	EPA involves in consultation with native American tribes in the implementation of national standard
5. States should gather and share information with US EPA and on the environmental issues delegated to them	EPA audits states implementation program delegated to the states
6. States can develop standards stringent than the federal standard	EPA interferes in interstate pollution issues, gives financial support to the states, together with technical support
7. States work collaboratively with EPA in the implementation of shared services	EPA provides scientific research, and builds states data gathering capacity and provides technologies.
8. States should be funded in the implementation of the federal program	EPA should fund the states, provides policies and standards

### ***2.3.1.6. Environmental Oversight in USA***

The environmental oversight is made by White House, EPA and the congress to check the implementation of environmental programs. To evaluate and strengthen the state's environmental program EPA oversees states performance. If states are in good progress it reduces its involvement in states program and directs its resource into other areas. If states performance is weak in its environmental program it needs more EPA's involvement. EPA's head quarter review performance data which comes from the EPA regional office which are responsible in reviewing the performance of states. It also evaluates the environmental performances of states by visiting the states' environmental offices, reviewing files, and interviewing the states managers. In addition to legislation the congress decides on EPA's fund yearly and it reviews EPA's performance of environmental program. The congress used its government accountability office to investigate performance of EPA. EPA receives the environmental data from regional environmental offices and states to report to Congress. If the Congress sees the decrease in performance of the agency, it punishes EPA by reducing its annual budget (Laskowski et al, 2005, Kraft, 2011).

### **2.3.2. Experience of Brazil**

The federal constitution of Brazilian federation recognized the existence of the three levels of governments (the federal, states and counties). In this regard, (Art.18) of the federal constitution of Brazil stated that "the political and administrative organization of the Federative Republic of Brazil includes the Union, States, Federal District, and Counties, all autonomous, as provided for in this Constitution". The federation consists of 26 states, one federal district, and 5,565 municipalities (Maria Souza, 2012: 140). Municipalities or counties leaders and vice leaders are elected by direct voice of residents through direct election which is carried out every four year (Art, 29). In Brazil the environmental protection power is a joint power which is shared between all levels of governments of the federation. As it is stated in Art 23: VI, "The Union, States, Federal District and Counties, shall have joint powers to protect the environment and combat pollution in any of its forms". With regard to legislation on environmental matters art 24:VI of the Brazil's federal constitution stated that "the Union, States and Federal District shall have concurrent power to legislate on forests, hunting, fishing, fauna, preservation of nature, defense of the soil and natural resources, protection of the environment and pollution control." With

regard to legislation of environmental protection OECD (20015: 6- 7) stated that “Brazil has developed a stringent and advanced environmental legislation framework at the national level and in most states”.

### ***2.3.2.1. Features of Brazilian Environmental management***

The fastest industrial development in the middle of 20<sup>th</sup>c was resulted in the beginning of environmental movements in Brazil. Environmental measures began to be taken in 1960s with creation of permanent protection areas surrounding the rivers and responsibility of farmers to protect forest reserves in their land. However, the environmental policy in Brazil becomes strengthened after 1972, following Stockholm declaration and as a result of environmentalist pressures. Following the Stockholm declaration Brazil began to improve its environmental policies by creating environmental structure called Special Secretariat of Environment which is responsible for preservation and maintenance of natural resources. In 1981 other environmental agencies: *the National Environmental System, the National Environmental Council and the Brazilian Institute of Environment and Renewable Natural Resources* were established (Erasmus Mundus, 2015)

With regard to environmental policies, Brazil enacted different legal frame works to protect the environment. Some of these legal frame works are: the Brazilian federal constitution, the Brazilian environmental policy of 1981, the environmental crimes act of 1981, the administrative environmental misdemeanors law of 2008, the mining code of 1967, the forest code of 2012, the Brazilian solid waste management policy of 2010, water code of 1934, the Brazilian water resources policy of 1997 and etc (P. Nogueira et al, 2014: 11).

With regard to pollution in Brazil the major problem is the contamination of water bodies and ground waters by sewage linkages, illegal disposals and discharge from houses, industries and leaching from farm lands. Even if the present law forces companies and farmers to prepare environmental impact study and improvement plans for protection of impacted area before implementation of their activity, many of them start the project before approval of the environmental impact assessment. Air pollution is also a significant problem in industrialized areas especially in S.E Brazil where industries densely populated. Causes of air pollution are smoke and particulates of industries, refinery, vehicles and open air landfills and dumps. To

control the quality of air at the end of 1980s national programs of air quality were established. The program established monitoring network system and gave the obligation of monitoring of air quality to the states. However, the system does not cover all urban areas of the country because of its cost and lack of technical and qualified staffs (Erasmus Mundus, 2015).

Brazil uses environmental tax system to monitor environmental performances of companies. The environmental control and inspections tax was established by law in 2000 with the amendment of the 1981 environmental policy. The tax is levied for monitoring and inspections of pollutant activities and users of natural resources. The tax amounts vary according to the companies' size and pollution potential and the level of use natural resources (P. Nogueira et al, 2014: 14).

Budget allocation for environmental management is increased by 48% between 2011 and 2014, reaching about 0.4% of the federal budget. However, the environmental budget is small to perform environmental program. Environmental funds are important source of finance for many environmental programs in Brazil. For example, national climate change fund, Amazon fund, and also some of oil and gas revenue is used to finance environmental and climate mitigation programs in Brazil (OECD, 2015: 6).

### ***2.3.2.2. The role of Municipalities in Brazilian Federation***

The Brazilian Federal constitution gives municipalities' equal status to states and federal governments. "They have a responsibility to protect the environment from any pollution as equal to states and Federal governments. Municipalities have a power to elect their leaders, have a power to establish their council, they have a power to legislate over their local interests, supplement state and local legislations where it is needed, levy and collect taxes within their jurisdiction, give local services such as transportation, pre-school and elementary education, provide health services with technical and financial support of states and the Federal government, manage urban land through planning and control of use, protecting local historic and cultural heritages through by seeing Legislation and Federal and state supervision actions" ( Art, 23, 29, 30).

With regard to environmental protection municipalities in Brazil are responsible for different environmental activities. These activities include; basic sanitation such as management of domestic and solid wastes, water supply, sewage disposal, urban cleaning, drainage and

management of rain water. It also play an important role in management of water which is under federal and state responsibility through integrated water management, sanitation and land use management for protection of water (Maria Souza, 2012: 143-144).

#### ***2.3.2.3. Environmental Structure in Brazil***

The institutional structures of the Brazilian environmental protection consists of: *National Environment Council* which functions as the advice-giving and „deliberative“ environment agency, Ministry of the Environment, serves as the central environment authority, Brazilian Environment and Renewable Resources Institute, which has the role of federal supervisory and enforcement authority and also include regional bodies, such as state environmental agencies and local environmental agencies (P. Nogueira et al, 2014: 11). With regard to the national environmental council, OECD (2015: 6) also stated that “the National Environmental Council, a high-level advisory and deliberative committee, brings together all levels of government and relevant stakeholders”.

#### ***2.3.2.4. Solid Waste Management system in Brazil***

Brazil is known by recycling of solid wastes; it recycled 98% aluminum, 40% glass, 70% paper, 19% plastic, 49% steel cans, and 92% tires. According to the solid waste management laws 5,500 municipalities shall establish final disposition of waste in proper way. To enhance the recycling of solid waste, the country established “take back” system in which the consumers returned back the product to distributors and distributors receive the product from consumers and give back to producers and producers prepare final destination for solid waste. This take back system creates job opportunities and reduces incorrect disposal of solid waste (Martins Carneiro, July 17, 2013). In Brazil different associations are organized on collecting the recycled wastes and benefit from it by getting significant earn from these wastes<sup>3</sup>.

There is a remarkable progress in the management of municipal landfills in Brazil. In 2008, 58.3% of landfills are sanitary landfills which are operating in compliance with technological control procedures and measures to reduce environmental impacts, 19.4% are controlled landfills operating with technical control procedures but not requiring environmental mitigation measures and 19.8% are open air landfills (N. Girouard and I.Capozza, 2015).

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<sup>3</sup>([http://www.un.org/esa/dsd/susdevtopics/sdt\\_pdfs/shanghaimanual/Chapter%205%20%20Wastemanagement.pdf](http://www.un.org/esa/dsd/susdevtopics/sdt_pdfs/shanghaimanual/Chapter%205%20%20Wastemanagement.pdf))

## **2.4. Environmental Impact Assessment**

According to Jay et al, (2007: 287) “Environmental impact assessment (EIA) is the evaluation of the effects likely to arise from a major project (or other action) significantly affecting the environment. It is a systematic process for considering possible impacts prior to a decision being taken on whether or not a proposal should be given approval to proceed”. UNEP, (January 16, 1987) also defines that “EIA means an examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development”.

With regard to the origin of EIA, the first country to establish EIA system by legislation in 1970 is the United States. Taking the experience of USA through international organizations, EIA spread into different countries of the world. By the end of 2005 more than 100 countries of the world had EIA regulation. The spread of EIA into developing country is the result of external pressure through international conventions, international environmental organizations, and donors’ communities. In Africa EIA is a recent phenomenon which has been introduced to many African countries as a result of recent initiatives including the 1995 African Ministerial Conference on Environment, an EIA stakeholders meeting in Nairobi in 1998, and the work of the Pan-African Initiative for Capacity Development and Linkages for EIA in Africa. In Africa EIA is not effectively implemented because of lack of trained experts, in adequate budgets and the outlook that EIA might hinder economic development (Jennifer G. Li, 2008).

EIA should incorporate detail information about the project, explanation of the impacts of the project, an alternative to curve the impacts of the project, direct and indirect impacts of the project, duration of the impacts (short or long term), measures taken to mitigate the impacts, gaps of knowledge which may happen in collection of information, whether the impact is bounded in the specific jurisdiction or spill over to other jurisdictions (UNEP, 1987: 1)

### **2.4.1. Significance of Environmental Impact Assessment**

EIA is used to discover projects which are not environmental friendly, design appropriate mechanisms to prevent or reduce impacts of the project, analyze appropriate options, forecast negative impacts, forward mitigation actions, give information to affected communities, help decision makers in the permission process<sup>4</sup>. It is used to give information to decision makers to

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<sup>4</sup> (<https://www.elaw.org/files/mining-eia-guidebook/Chapter2.pdf>).

think on different aspects of the project such as locations, magnitude, cycles, designs, working conditions, in a few cases the choice to stop the implementation of a project and ways to prevent, mitigate and control potential negative environmental and social impacts (Jenifer G. Li, 2008: 1). EIA is used as a tool to know the possible impacts of the project on human being, environment, flora and fauna and should be conducted at the planning stage because if the project has high negative impact it can be changed before going into implementation phase (J. Wright et al, 2013:72).

In general, EIA is helpful to improve design of projects, enhance decision making having information on environmental impacts of the project with strong public participation, bring accountability and transparency in the decision making process, decrease environmental degradation and to bring sustainable development (UNEP, 2004:7-8).

#### **2.4.2. Principles of EIA**

There are basic principles which should be considered in the EIA process. Accordingly, EIA should be “purposive”, in this regard it should help decision making process and implementation of environmental protection in respecting the need of the community. The process of EIA should also be “rigorous”, in this respect the EIA process should include scientific methods and technologies to address existing problems. It should also “practical”, the process should be problem solving and should be implemented. The process of EIA should also be “relevant”, should provide adequate and real information for planning and decision making. It should also “cost effective”, it should take into account available knowledge, time and resource in its implementation and it should impose cost on proponents to achieve the required objective. In addition the process should also be “focused”, should focus on issues that need to be considered in the decision make process. Similarly, the process should be “adaptive”, should be adjusted according to existing circumstance and should include what is learned through its process (IAIA, 1999).

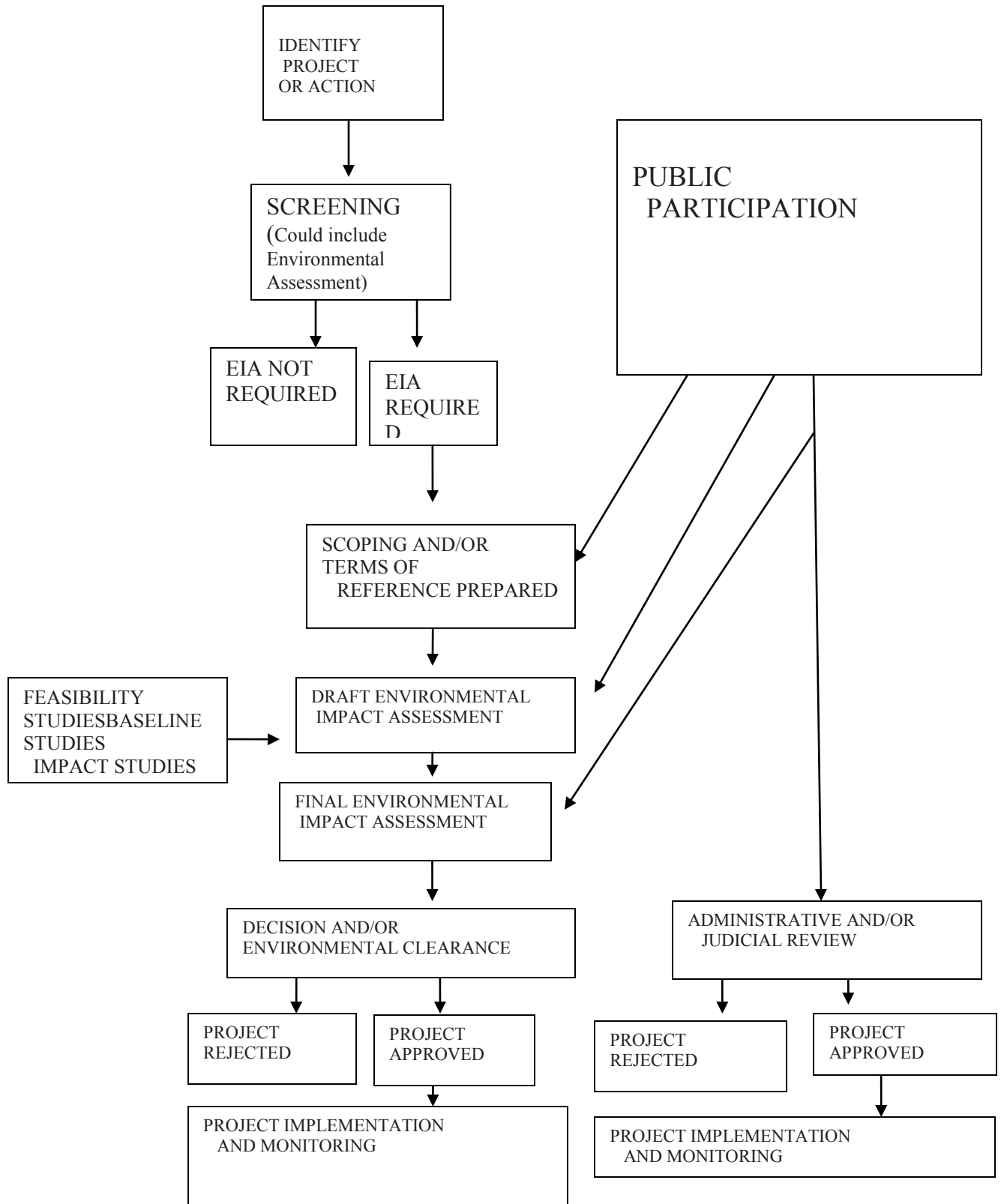
EIA process should be “participative”, should involve the affected communities and their interests should be incorporated into decision making. It should also be “interdisciplinary”, should participate diverse experts from different disciplines such as biophysical and socioeconomics. The process should also be “credible”, should be prepared by professionals,

should be strict, reasonable and should be objective. In addition, the process should be “integrated”, should incorporate relationship of socio-economic and biophysical feature. The process should also be “transparent”, should have clear criteria, ensure public participation, and include issues to be taken into account in the process of decision making. In addition, the process should be “systematic”, should incorporate all information of the impacts, forwarded alternatives and measures to be taken to reduce impacts (IAIA, 1999).

### **2.4.3. EIA Procedures and Processes**

EIA passes through different stages before coming into implementation. These stages are: “Screening”, in which it is decided that the project should need EIA or not. The next stage is “scoping”, in which issues and the future impacts are known to prepare terms of reference. The other stage is “examination of alternatives”, in which appropriate alternatives are identified to achieve the proposed activities. Then after, “impact analysis” is carried out to identify and forecast environmental, social and other impacts of the project. Then “mitigation and management” is carried out to avoid or reduce the forecasted negative impacts, to include it into environmental management plan. Following it, “evaluation of significance” is carried out to determine all impacts that cannot be avoided or reduced. Then the next stage is “preparation of environmental study report” in which environmental study report is prepared including impacts of the proposed projects, mitigation measures and interests of the public and affected communities. Following the environmental study report, “EIA review” is performed to evaluate the study reports whether it meets or not with issues listed in terms of reference. Then “decision making” is followed to approve or cancel the project and to include issues and conditions in implementation of the projects. And the final stage is “follow up” stage in which monitoring activities are carried out. In this stage environmental auditing is made to see the effectiveness of EIA and to enhance the environmental management system (IAIA, 1999).

The Basic Elements of Good EIA practice : Source,  
<https://www.elaw.org/files/mining-eia-guidebook/Chapter2.pdf>, Cited on december 15/2017



## **2.5. The Role of public participation in Environmental Decision Making**

Democratic decision making needs public participation at every phase of environmental decision making process. Public participation in the environmental matters is important for effective environmental policy formulation and implementation. Environmental policy should be socially acceptable and it needs collaborative effort of the whole public. In this regard, some scholars argued that problem may happen in public participation if public do not understand complex environmental issues. Some scholars also argued that people can learn if opportunities are given to them. According to them it is possible to enhance public participation for effective environmental management by making environmental policies easier for public participation (Kraft, 2011: 38-39).

Citizens are one of the resources which can enforce environmental laws and regulations. They know environmental circumstances at their ground and they have day to day observation than the government bodies. Since public have information about their environment, using this public information in the decision making process enhances the quality of environmental decision. Thus, Public involvement in environmental decision making helps to improve the quality of environmental decision. Citizens' involvement enhances public awareness on environmental protection and helps for effective implementation of environmental objectives. Citizens' participation in environmental decision making also makes government accountable to its environmental regulation. Through their participation, citizens can comment the environmental regulation, they can identify areas which need new regulation and supervise compliance in areas which have regulation for further improvement. Citizens have a capacity to see new environmental problems, they can see easily an increase of waste emission from plants and they can inform the government to take appropriate measures and even in areas where public involvement is high they can present the case before the court when the government is reluctant to react against serious pollution. Therefore, if citizens are not allowed to take part in environmental decision making process, the implementation of environmental policy remains only tiger on the paper<sup>5</sup>.

Effective public participation also makes environmental decision to be more legitimate and helps for improvement of implementation of environmental goals. It help to get public credibility, it

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<sup>5</sup> <https://www.elaw.org/files/mining-eia-guidebook/Chapter2.pdf>

helps to get solution for future challenges, it creates sense of ownerships in policy formulation and implementation, helps to see the environmental problem that expert miss it and it gives a chance for the participation of affected bodies to raise their concern<sup>6</sup>.

Practically, most of the processes of environmental policy are dominated by science and scientific experts rather than public participation. Scientific research could not address all aspects of the environment. For instance socio cultural aspects of the environment can be addressed through public participation. Therefore, it needs taking into account public participation in the environmental policy formulation and implementation. The importance of public participation for successful environmental policy has been given attention at national and international level. For instance, the UN conference on environment and development (Rio 1992) agreed up on the need for public involvement in the formulation and performance of all forms of environmental policy. However, discussions over environmental policies are made between experts excluding public participation which resulted in top down policy for implementation. The public participation is not seen in the process of policy formulation. Many times public participation is relied on awareness creation rather than active involvement in policy formulation. In general the public participation on environmental issues should go beyond awareness creation. Because, Successful environmental policy needs not only public understanding of scientific environmental issues, but also the moral, ethical, cultural and behavioral issues of environment (S. Eder, 1996:183-198).

### **Conclusion**

The issues of environmental power division among the levels of government become highly debatable. Some argued that decentralization of environmental standard brings destructive outcomes as it is resulted in race to the bottom and local spillover effects. The centrists also argued that because of absence of adequate human power at the local level which can implement the policies at the local level centralization of the environmental standard is quite important. Contrary to this, decentralists argued that decentralization of environmental standard enhances democratic public participation at the local level. They also argue that decentralization helps to respond according to local public preference, it helps to include the need of affected

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<sup>6</sup>[http://www.ufz.de/export/data/2/80074\\_wesselink\\_paavola\\_fritsch\\_renn\\_epa\\_participation\\_rationales.pdf](http://www.ufz.de/export/data/2/80074_wesselink_paavola_fritsch_renn_epa_participation_rationales.pdf)

communities, to perform cost effective programs, helps for better policy innovation and it enhances public control over environmental issues.

Some also argue that mere centralization or decentralization environmental power does not bring efficient outcomes. Some environmental problem needs central efforts and others need local efforts. As a result, using either centralization or decentralization according to the existing circumstance could enhance the implementation of environmental programs. In this regard, all levels of governments should play its role in environmental protection activities and collaboration of all levels of government is also important.

In other hand, the experience of USA and Brazil shows there are an important issues which Ethiopia should learn from it. As it is known in USA, before 1970s the issues of environment is highly decentralized and after 1970s there is a high degree of centralization with high command and control strategies giving unfunded mandates to the states. However, recently USA moved from command and control approach to collaborative approach of environmental governance which omitted unfunded mandate.

In USA the profile of every pollutant industries are collected by the states and released on the federal Environmental Authority's website. This helps to put pressure on the pollutant industries to improve their performance of environmental protection. With regard to solid waste management in USA, the recycling program is largely carried out at the local government levels having clear standard on the content requirements for recycling program and the local governments also ban non-recyclable materials. To solve the coordination problem among environmental sectors in USA special departments has been established in white house. Besides, Judiciary is also one of the organs which support the implementation of environmental activities in USA.

With regard to intergovernmental relation, there are different formal intergovernmental system and institutions in USA which play a role in the performance of environmental activities. There are different IGRs between states and local governments, partnership agreements between states and federal governments and environmental council of states are some examples of IGR in USA.

Brazil is also one of the federations which stated in its federal constitution environmental power as a joint power of all levels of governments in a federation. The country is highly challenged by

industrial pollution which is highly contaminating water bodies and its EIA system is not practical like of us and it is also known by the problem of solid waste disposal. But now a day, there is a good progress in the solid waste management system in Brazil. The country is known by recycling and „take back“ system in which the consumers returned used materials to producers which reduce pressure on landfills. The country decreased open landfills and increased controlled landfills using technologies. Municipalities in Brazil have also given identified responsibilities in the local environmental matters. With regard to intergovernmental relation in environmental matters of Brazil, national environmental council brings all levels of governments and other environmental stake holders in the country.

In other hand, EIA is an important tool which helps to control adverse impacts of development projects. It has a basic principles and procedures which should be considered during the study process of the impact. The EIA process needs public participation in the process of the study and decision making. The public participation should not only bind to get information on the environmental issues. The public should also take a part in the environmental decision making.

## CHAPTER THREE

### **3. Policy, Institutional Frameworks and The Practice of Environmental Protection in Ethiopia**

#### **Introduction**

Environmental policies are important to guide environmental activities of once country. They are a means to get direction for effective implementation of environmental objectives and programs at every levels of government. It helps to protect the adverse effect of activities on environment and human being. Besides, environmental institutions are also vital to change environmental policies into practice. Likewise, the environmental protection needs the practical implementation of the existing environmental policies and laws.

Thus, this chapter first reviews and evaluates the policy, legal, institutional frameworks and implementation of environmental protection of the federal government and regional state of Oromia.

#### **3.1. Environmental Policy and Legal Frameworks of Ethiopia**

##### **3.1.1. Pre 1991 Environmental Policy of Ethiopia: An Overview**

Before occupation of Italian force in Ethiopia (1936-41), formal environmental laws were rarely enacted in Ethiopia. However, during its occupation to Ethiopia, Italians enacted resource laws to extract the natural resource of the country rather than focusing on the issues of environmental protection of the country. During this time Italians introduced a number of decrees and implemented disparaging programs on forest to fuel development. Similarly, after the forced evacuation of Italians, the imperial regime gave attention for the development of agricultural sector for both domestic consumption and export. As a result, forest land was forced to be used for the use of agricultural purpose which was resulted in a decrease of forest coverage of the country almost by half (Matthew Cheever etal, 2011). Large destruction of forests which caused high soil erosion and famine, for example in Wollo and Tigrai forced the environmental advisor of the time to call for huge state led environmental program ignoring the role of peasants by promoting highly centralized environmental policy and management (Desalegn, 2001).

Then, following the fall of imperial regime, the Derg (1975-91) led by socialist ideology, highly increased the role of the government in managing resource. The environmental protection system

of the Derg regime was manifested by “top-down” management system. During this time the Derg launched conservation and tree planting programs in which large number of hectares of lands was forcefully taken from communities and individuals for purpose of this program (Matthew Cheever etal, 2011). The rural communities and local government structures were excluded in the process and blocked from access to natural resources. The program did not take into account the need of the local communities rather it was imposed from the central government that is why when the regime was overthrown in 1991 most of the environmental activities which were started by the Derg were destroyed by the public at local level. Then, the fall of the regime is followed by ideological shift in environmental management in setting up environmental institutions and new policy direction in environmental protection of the country (Matthew Cheever etal, 2011, Desalegn 2001).

### **3.1.2. Environmental Policy and Legal Frameworks of the Ethiopian Federation**

Enacting environmental laws in a separate manner is the recent improvement in the law enacting history of Ethiopia. Before recent time laws which were dealing with environmental issues scattered in different legal documents of the country (Mellese, 2010:1). Recently, to prevent environment from environmental pollution, the federal government enacted many environmental policies and laws. The policy framework of the country also established institutional frameworks for environmental protection of the country. With these policy frameworks the government also tried to mainstream the environmental programs in the development process of the country (E. César and A. Ekbom, 2013:10-12). One of the important steps taken by the Ethiopian government is the establishment of the environmental authority by proclamation in 1995<sup>7</sup>.

The environmental policy of the Federal Democratic Republic of Ethiopia which was approved in 1997 is the first basic fundamental document which contains basic principles in the protection of the environment from any pollution in line with sustainable development of the country. Besides, the pushing factors for enactment of environmental policies of the country are both external and internal pressure. There are different treaties at international arena in which Ethiopia becomes one of the signatory and acquired an obligation for implementation of these

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<sup>7</sup> (<https://www.iaia.org/pdf/case-studies/EthiopiaProject.pdf>)

environmental treaties. Some of these international treaties are UN convention on climate change of 1994, the 1994 convention of Biological diversity, the 1994 UN convention to fight desertification, the 2000 Cartagena convention on Biological diversity and the Stockholm convention on organic pollutants of 2000 (E. César and A. Ekbom, 2013:11). Specifically, there are different international obligations initiated by UN General Assembly to use EIA in the development process of members' countries. Starting from 1972 up to recent Rio declaration there were different international initiatives calling EIA to be included in the development process of member states. Hence, because of many international conventions on EIA and inclusion of EIA requirements by international financial institutions EIA get universal acceptance. Ethiopia also accepted the EIA system because of these international circumstances (Mulugeta, 2013). In this respect, J. Krueger (2012) also argued that Ethiopia enacted environmental laws under such increasing influence on environmental issues at international arena.

With regard to internal factor, the country was highly in a deep poverty in which 44% of the population were below line of poverty which resulted in focus of the government to put out the public from poverty through agricultural led industrialization strategy which needed balancing the issues of development with environmental issues. This is an internal driver for enacting environmental policy to harmonize the development agenda with environmental agenda (Matthew Cheever et al, 2011).

In general, after the fall of the Derg regime, many environmental laws were enacted to address environmental issues of the country (Matthew Cheever et al, 2011). The federal government of Ethiopia has shown political commitment on issues of environmental protection in establishing environmental protection institutions at federal and regional states, enacting a number of environmental laws and ratifying international environmental conventions (E. César and A. Ekbom, 2013:14). The environmental laws of Ethiopia are also getting improved from time to time. It changed from historic focus of natural resource utilization to other environmental aspects such as pollution by including regulatory aspects of the environment such as environmental impact assessment (Mellese, 2010:18).

## **3.2. Federal Government and Environment**

### **3.2.1. Federal Environmental Policy, Legal Frameworks and Environmental Structures**

#### ***3.2.1.1. Federal Environmental Policy and Legal Frameworks***

At federal level to protect the environment from environmental pollution many environmental laws have been enacted by legislature<sup>8</sup>. To begin with the federal constitution, the 1995 FDRE constitution is the foundation for the latter environmental policy in particular and other environmental legal frameworks of Ethiopia in general. The constitution entrenched basic environmental principles and guide lines. To mention some of the constitutional provision: Article (43:2) stated that “nationals have the right to participate in national development and, in particular, to be consulted with respect to policies and projects affecting their community”. Similarly, Article (44:1) of the FDRE constitution stated that “all persons have the right to a clean and healthy Environment”. In its provision of Environmental objectives, Art (92:1) of the constitution also stated that “the Government shall Endeavour to ensure that all Ethiopians live in a clean and healthy environment”. The constitution also included other basic framework in which the process of any development should be compatible with the environment. In this regard, Art (92:2) of the constitution further stated that “the design and implementation of programs and projects of development shall not damage or destroy the environment.” The constitution also stated in the same article in its no.3 “peoples have the right to full consultation and the expression of views in the planning and implementation of environmental policies and projects that affect them directly”. The constitution also gives the mandate to protect the environment to government and peoples of the country. In this regard, Art (92:4) stated that “Government and citizens shall have the duty to protect the environment”.

The Constitution of FDRE becomes an important foundation for the protection of environment in the country. The question, however, is whether the constitutionally guaranteed provisions are implemented or not, and this is the central focus of this thesis.

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<sup>8</sup> Interview with Director General of policy and Legal Directorate of the Ministry 28/03/2018

## **The 1997 Environmental Policy of Ethiopia**

As it is stated in this policy document the general objectives of the policy is “to improve and enhance the health and quality of life of all Ethiopians and to promote sustainable social and economic development through the sound management and use of natural, human-made and cultural resources and the environment as a whole so as to meet the needs of the present generation without compromising the ability of future generations to meet their own needs”.

This policy also included different specific objectives in the protection of the environment. To mention some of these specific objectives: preventing pollution of land, air and water in cost effective manner so that the cost would not exceeds the benefits, guarantying the empowerment and participation of public in environmental activities at all levels and raising public awareness and promoting the understanding of relationship between environment and development.

The policy also established different guiding principles of environmental protection of the country. For instance, the right to live in a healthy environment, sustainable environmental condition and economic development, power of communities to make their own decision on matters that affect their life and environment, the incorporation of the environmental issue to public and private sector planning, creation of conditions for community and individual to manage their own environment and resources, regular and accurate assessment and monitoring of environmental conditions, increase awareness and understanding of environmental issue, interdependence of local, regional and international on environmental issue, integrated implementation of cross-sect oral and sect-oral federal, regional and local policies and strategies.

The policy also stated about the importance of environmental impact assessment in ensuring environmental protection. As it is mentioned in this policy document, environmental impact assessment should: take into account impacts of development activities on physical, biological, socio economic, political and cultural conditions. It should also consider public consultation as an essential part of EIA. It should also include mitigation plans for managing the environmental problems. In addition, it should include about issues of environmental audits, environmental inspection and record keeping. It should also include institutional frameworks for coordination and approval of EIA and there should be technical guidelines in EIA and environmental audits. Besides, it should be legally binding for public and private projects.

In addition, different policy directions on environmental education and awareness are included in the environmental policy of Ethiopia. These policy directions include: promotion of environmental education of multidisciplinary basis integrating it into curriculum of schools and colleges. Environmental education and awareness creation programs for public and private sector sectors are also included in the policy direction. In addition, the role of media in creating awareness on environmental issues is also included. The policy also laid direction to strength higher education institutions to provide environmental management programs. In addition, giving in service training, encouraging the local environmental awareness creation programs by supporting it by scientific inputs and initiating, encouraging and supporting the local community and religious leaders in creation of environmental awareness are also included in the environmental policy directions.

In sum, the 1997 federal environmental policy of Ethiopia included general policy directions, specific sect-oral policy directions, institutional frameworks, responsibilities and mandates, legal frameworks as well as monitoring, evaluation and policy review in the Environmental protection of the country.

Besides, to environmental policy, the federal government of Ethiopia also adopted Climate Resilience Green Economy Strategy in 2011. In this respect, the country aimed to become middle income country by 2025 without increment of greenhouse gas emission. Among the pillars of CRGES one of the pillars of the strategy is using appropriate technology in industry to decrease the emission of industrial wastes (UN Economic Commission for Africa, 2015). The strategy aimed to enhance development without harming the environment (Ministry of Environment and forestry, 2015).

### **Environmental Impact Assessment Proclamation (Proclamation No. 299/2002)**

As already hinted, Proclamation No. 299/2002 for Environmental Impact Assessment is used “to foresee and handle the environmental effects during design, construction and operation phases of the project”. It is an assessment of impacts on the environment before the approval of the project which helps to integrate environmental consideration into decision making which helps to promote sustainable development. It also helps to bring transparency and accountability as well

as to involve the public in the decision making process during planning and implementation process with regard to the issues of environment which affect them and their environment.

This proclamation underlines the basic principles and guidelines for the environmental protection. Some of the provisions of the proclamation are stated as follow:

The proclamation makes mandatory for any projects to have environmental impact assessment which shall be approved by the environmental authority. To this end, Article 3(1-3) states that “without authorization from the Authority or from the relevant regional environmental agency, no person shall commence implementation of any project that requires environmental impact assessment”. With regard to licensing process the proclamation states that “any licensing agency shall, prior to issuing an investment permit or a trade or an operating license for any project, ensure that the Authority or the relevant regional environmental agency has authorized its implementation”.

On the issues of accountability, the proclamation states that even if the environmental authority gives approval for the impact assessment of the project, the proponent is accountable for the damage made by the project during implementation period. The Proclamation is silent what happens to accountability if the authority wrongly approves the Environmental Impact Assessment of the project. This is paradoxical in that the proponent of the project is accountable for any environmental damages even if the impact of the project is approved by the authority while there is no similar obligation on the part of the authority endorsing the environmental impact assessment for the project.

The proclamation also included significant issues which should be considered in the environmental impact assessment process. To this end, Article 4 of the proclamations states that

*The impact of a project shall be assessed on the basis of the size, location, nature, cumulative effect with other concurrent impacts or phenomena, trans- regional effect, duration, reversibility or irreversibility or other related effects of the project. The Authority or the relevant regional environmental agency shall err on the side of caution while determining the negative impact of a project having both beneficial and detrimental effects, but which, on balance, is only slightly or arguably beneficial, and thus determine that it is likely to entail a negative significant impact.*

With regard to projects requiring environmental impact assessment, the lists of the projects is not stated in the proclamation. The list of the projects is left for other future directives. However, there are no formally approved directives by the federal environmental council according to mandates given to it by the environmental protection organs establishment proclamation. Thus since the directives are not approved by the environmental council, legally speaking the proclamation lacks power which force proponents to do EIA. The proponents do EIA not because of legal requirement but because of other factors (Degene 2012).

On the one hand, the Proclamation incorporates the duties of the proponent in relation to the environmental impact assessment. To this end, the proponent shall carry out an environmental impact assessment, shall identify impacts of his/her project, shall incorporate the means of avoidance and submit to environmental authority. Moreover, the proponent shall ensure that the preparation of the environmental impact assessment should meet the requirements specified by the environmental authority. The proclamation further stated that during implementation of the project a proponent shall full fill the terms and conditions of authorization.

The proclamation also included about the issue of the environmental study report. Accordingly, as it is stated in the proclamation, an environmental study report shall contain sufficient information to enable the authority or the relevant regional environmental agency to determine whether and under what conditions the project shall proceed. Similarly Article 8(2) of the proclamation stated that an environmental impact study report shall contain: nature of the project expressed in terms of the technology and processes it involves, the content and amount of pollutant that will be released during implementation as well as during operation; source and amount of energy required for operation; information on likely trans-regional impacts; characteristics and duration of all the estimated direct or indirect, positive or negative impacts; measures proposed to eliminate, minimize, or mitigate negative impacts; contingency plan in case of accident; and procedures of self-auditing and monitoring during implementation and operation.

On the other hand, the proclamation gives a mandate for environmental authority to prepare guidelines for preparation of the environmental study report as well as for reviewing the environmental study report. It also contains about the review of the Environmental Study Report. As it is stated in the Proclamation, the environmental study report, which is submitted to the

environmental authority, shall include a brief statement summarizing the study indicating the completeness and accuracy of the information presented in the report. After evaluating the environmental study report by incorporating public comments and expert opinions within 15 working days, the environmental authority approve the project and issue authorization without any condition if the project will not cause negative impacts, approve the project and issue authorization with a condition if the project has less negative impact and if it is believed that the impact can be reduced or avoided. The authority rejects the implementation of the project if it is known that the negative impact cannot be reduced or avoided. With regard to 15 days for approval of the study report the time given to the public comment and expert approval is not enough and this condition seems a principle rather than practice. That is why the impact assessment is not complete and most of the time the problem is seen at the implementation phase rather than prior to the implementation of the project.

The proclamation also included procedural guidelines for validation of the EIA study report that should be followed by the proponent as well as environmental authority. According to Article (10:1) of the Proclamation the authorization shall be expired if the project failed to be implemented according to the time framework given during authorization. However, the practice shows that different projects are not started and implemented within the time framework given by the environmental authority and after a long period of time without reassessing the impact, they get in to practice. In this regard, there is a contradiction between principle and practice.

Remarkably, the Proclamation makes public participation as mandatory factor for studying the environmental impact of a given project. In this light, Article 15 of the same Proclamation states that the authority or regional environmental agency shall make environmental study report accessible for public comment and shall ensure the incorporation of publics and affected communities' comments in the impact study report and in its evaluation.

Furthermore, the Proclamation also included issues of offences and Penalties for the violation of the impact assessment Proclamation. In this respect, Article 18 of the Proclamation stated that anyone who came into operation without having authorization license and who present false on environmental study report shall be punished not less than fifty thousand birr and not more than one hundred thousand birr. If any person failed to keep environmental records and failed to fulfill conditions of authorization shall be penalized not less than ten thousand birr and not more than

twenty thousand birr. If Managers of firms commits an offence he shall be penalized not less than five thousand birr and not more than ten thousand birr. Similarly, it is stated that the court may order compensation for the damage caused.

The penalties which are listed above also are not sufficient to stop the violation of the proclamation and are not congruent with the impacts on the human health. The issue of compensation also shall not be open for judiciary as optional clause rather it should be clearly stated in the proclamation as mandatory issue rather than optional.

In nutshell, the EIA Proclamation No 299/2002 gives mandate for issuing directives for Environmental Authority. Yet, the directives and guidelines on the part of the Federal Environmental Authority have not come out. According to Dagene (2012:34), the absence supplementary laws to change the EIA proclamation into practice, resulted in the failure of the proclamation to bring intended out comes. Because the provisions of the proclamation are too general and it is difficult to change it into practice without having supplementary laws. This shows the need of providing appropriate regulations and directives to bring the EIA proclamation into practice.

With regard to adequacy of legal frameworks for EIA system in Ethiopia, the proclamation is inadequate since it is too general. Some provisions of the proclamation cannot be used without supplementary laws to change it into practice. Besides, it does not provide adequate time for public consultation. There are no binding rules and regulations for public participation in EIA review, the proclamation is too general in this regard. For instance it is not known in which system the environmental authority shall present the EIA study report for public comment. It does not also mention actions which are subjected to EIA and actions which are not subject to it. In this regard, the council of ministries has not enacted regulations to support the implementation of EIA. In addition, there are no formally approved directives to enhance the implementation of EIA in Ethiopia. Directives are also at a draft stage. Similarly, the failure of the EIA proclamation to include public projects is also one of the weaknesses of the proclamation. The proclamation is only focuses on private projects rather than government projects since criminal measures are not applied to the public proponents (Degene 2012).

Many environmental laws of Ethiopia are enacted without formulation of supplementary laws because of the economic focus of the government, disregarding environmental issue in the practical development process of the country. This is resulted from the fear that if strong environmental laws are provided it may harm economic development of the country; there is a fear that many industries look other opportunities and move out of the country (J. Krueger etal, 2012).

Besides, according to Degene (2012), the reason why the EIA proclamation lacks supplementary laws is resulted from lack of political commitment from the government side to put the EIA proclamation into practice. Even if the federal government shows its political commitment to formulate EIA proclamation, the absence of supplementary laws to enhance its implementation shows the absence of political commitment to change the proclamation into practice. Practically speaking, the government gives more attention to the developmental agenda rather than the environmental issue. For instance, Investment proclamation no. 280/2002 was amended by proclamation no. 375/2003 and the councils of ministries also enacted regulation no. 84/2003. Similarly, this investment regulation was amended by regulation no. 146/2008. This shows the political commitment of the government to promote investment in the country. However, the EIA proclamation has never been amended since its enactment and no regulations and directives are enacted by the federal government for the implementation of EIA proclamation which shows the lack of political commitment of the federal government towards environmental issue. According to Degene the other reason for lack of political commitment is the proclamation is not the result of internal initiative rather it is the result of external pressure. The international institutions like World Bank makes EIA mandatory before the starting of the project otherwise they have no place to lend many for projects. The practical experience of Ethiopia also shows that are only projects which are constructed under such circumstance which have EIA. However, most of the government projects which have no linkage with international financial institutions came into implementation phase without having EIA. This shows lack of political commitment from the government side that is why it becomes reluctant to provide supplementary laws to support the implementation of EIA proclamation.

The practical implementation of EIA in Ethiopia is very weak. EIA is not given adequate attention in the development activities in the country. For instance, the investment proclamation

which was enacted in 2002 and later amended in 2003 excluded the EIA's requirement while giving investment license. This shows the agenda of the federal government is towards development not on the issues of environment that is why the investment commission rejected requirement of environmental certificate as a criteria to give investment license (Mulugeta 2013:222-223). As (Mulugeta, 2013:223) cited Solomon (2009) there is variations between licensed projects by investment commission and the projects which were licensed by the federal environmental authority. Between 1996 and 1998 out of 11,091 licensed projects by Investment commission, only 3,311 projects were given environmental competence certificate by EPA.

According to J. Krueger et al (2012) the standard to get license from investment commission is 4-5 days. Since EIA needs more time to prepare it the commission omitted the requirement of EIA by investment proclamation which was enacted after EIA proclamation. since that time the investment commission issued investment license without requirement of EIA and the commission also argued that after investment license is given the issue of environmental protection is up to the Environmental Protection Authority to oversee its implementation at the ground. However, the system of EIA works only if it becomes part of the plan of the project.

With regard to preparing EIA, the EIA proclamation mentions the term experts rather than expert so that EIA is prepared by a group of experts having necessary experience and knowledge on EIA. However, there are no any directives for certifying and registration of consultants. Besides, there are no formal procedures to renew license of consultants. The procedural guide lines are still at a draft stage (Degene, 2012:40-41).

Generally, the federal government of Ethiopia has taken important measures to introduce the EIA proclamation for environmental protection of the country. However, the practice of the EIA system in the country is very weak and appropriate mechanisms to be designed to change the proclamation into practice. The situation needs practical actions with full commitment to change the existing laws into practice.

### **Environmental Pollution Control Proclamation (Proclamation No. 300/2002)**

Proclamation No. 300/2002 intends to eliminate or reduce the negative impacts of projects on the human and biotic life as well as the environment in general. The proclamation prohibited any person from polluting the environment by violating the environmental standard. It also stated that

the environmental authority or regional environmental agency shall take legal and administrative measures on the environmental pollution which negatively affect public life. The proclamation makes mandatory that the polluters shall pay the cost for cleaning the polluted environment and shall use appropriate technologies which reduce environmental pollution. Similarly, the proclamation included a provision which force the environmental authority both at federal and regional state level to take measures up to closing and relocating the project which cause damage to human health and environment.

The proclamation also included about the management of urban waste. In this regard, it is stated that all urban administration shall ensure the collection, transportation, appropriate recycling, and safe disposal of municipal waste through municipal waste management institution. Similarly, the proclamation gives mandate for environmental authority, monitoring and evaluation of sufficiency of municipal waste management system and ensure for effective implementation.

With regard to environmental standard the proclamation gives mandate for formulation of environmental standard to environmental authority. The proclamation also stated the sectors which need the environmental standard. Article 6(1) of the proclamation listed the sectors which require environmental standard. These standards are: standard to discharge pollutant to water body, air quality standard, and standard to discharge pollutant to the soil, standard for noise and standard for waste management.

However, there is no any standard which are prepared for both water and air quality in Ethiopia (J.Krueger, 2012). This makes difficult to monitor and control water and air quality in the absence of clear standard in the country.

With regard to the right to standing, the proclamation stated that any person can present his complaint to the authority against any person causing damage to the environment without any condition. According to this proclamation, when the environmental authority failed to respond to the complaint within 30 days and if the subject of appeal is dissatisfied by the decision the person may present the case to the court within 60 days from the date the decision is given or after the end of the dead line in which decision is made if the authority failed to give decision within the given dead line. In this regard, is there public awareness to present decision to the

environmental authority let alone to the court? This is also one of the issues which the study tried to address it.

With regard to offences related to pollution, the proclamation included the issues offences related to pollution. In this regard (Art. 16) of the proclamation specifically stated that a natural person discharges pollutant shall be penalized not less than one thousand birr and not more than five thousand or imprisonment of not less than one year and not more than ten years or both. If the juridical person make an offence shall be penalized not less than five thousand birr and not more than twenty thousand birr and the imprisonment of manager for not less than five years and not more than ten years or the manager shall be penalized by not less than five thousand birr and not more than ten thousand birr or both birr and imprisonment.

In addition to the above penalties, the proclamation stated that the court may impose other penalties such as confiscation of the materials by which the person commits offenses, pay cost of cleaning and if restoration is not possible paying compensation. As to me the above penalties are not enough. If the pollution creates total damage on the environment and causes serious problem on human and biotic animals the penalties are very minimum. In general, do this penalties and compensation is practical or remain in principle? This is also an issue of this study.

### **Council of Ministers Regulation to Provide for Prevention of Industrial Pollution (Regulation No. 159/2008)**

It was after six years of the pollution control proclamation that the regulation was issued. According to (Mellese, 2010: 9) the legal and policy document review show that there have been many efforts made by the federal government to enact environmental laws. However, there are no sufficient regulations for implementation of these proclamations but Council of Ministers Regulation (regulation No. 159/2008) is the only regulation which aimed to put the industrial pollution control proclamation into practice.

The regulation included general obligations which should be full filled by factories to prevent the environment from industrial pollution. In this regard, Article. 4 of the regulation emphasized that a factory subject to the regulation shall avoid or if not possible shall reduce the generation of pollutant by not exceeding the standard set by the environmental authority. The factories have an obligation to keep its equipment, input, and product from causing damage on human and animal

health. The factory shall report to the relevant environmental authority about its pollutant, input and product under its ownership. In addition, it is stated that if factories make an offence by violating the provisions of the regulation, relevant environmental organ may need to take appropriate corrective measures to reduce risk occurrence.

With regard to the issue of licensing, the regulation stated the procedural guide lines to issue licensing to the factories. In this respect, Art. 5 of the regulation stated that “the competent licensing agency can grant a license to a factory after verifying that the effluent is not a pollutant or will not exceed the limit set by set under the relevant environmental standard and it will not entail damage if released into the environment”.

In other hand the regulation included procedural guide lines for suspension and cancelation of license. In this respect, the regulation stated that competent environmental organ shall make a decision to suspend or cancel license if factories failed to meet the conditions of license. According to this regulation competent environmental organ has also a mandate to make decision on suspension or cancelation of the license even if the factory meet the condition under the regulation and if it has a reason that the factory causes severe pollution on the environment. In this regard, the regulation also stated that the competent environmental organ shall notify the reason for the suspension or cancelation of the license to the licensing agency and so that licensing agency enforce the decision. This shows IGR of environmental organs in principle.

With regard to public complaint, the regulation stated that any person can present complaint without any condition as it is stated in the pollution control proclamation. In this respect, the regulation stated that competent environmental authority shall respond to the complaint within 90 days. Additionally, the regulation stated that if a person could not be satisfied by the decision of the complaint environmental organ he/she may present the case to the head of environmental organ and the head of environmental organ shall respond within 30 days after he received complaint. This shows that the case will stay 120 days in the environmental organ if it cannot be ended in the first phase. However, the pollution control proclamation gives 30 days to respond to the complaint. In the Proclamation if the person could not be satisfied by the decision, within 60 days he may present the issue before the court. This time is shorter than the time presented in the regulation. The regulation also does not say anything if a person could not be satisfied by the decision of environmental Organ head, it left the presentation of the case before the court. In this

regard, there is a difference between proclamation and regulation. In the environmental impact assessment proclamation only 15 days are given for public discussion before the approval of environmental impact study report. However, to get response of their complaint it takes 120 days.

The regulation also included about keeping information as mandatory element for factories subject to the regulation. In this regard, Article 11 of the regulation stated that:

- 1. Any factory subject to this regulation shall keep written information describing the equipment and input it has used, the product, the product it has produced, the pollutant it has generated, and the disposal mechanism it has used to dispose of the pollutant and other related matters.*
- 2. Every factory shall submit to the competing environmental organ annual report describing how it is complying with the provisions of this regulation.*

The regulation also discussed about the obligation of existing factories during the issuance of this regulation. In this regard, the regulation stated that the existing factories shall fully comply with the regulation within 5 years" time frameworks, apply environmental audit, prepare and implement an environmental management plan and if the factories unable to avoid or reduce the adverse impacts they will be relocated or closed. Does this provision is practical? This is also a critical problem in Burayou city in which different factories located within residential areas causing pollution on the residential environment and this research also tries to address the existing problems in this regard.

### **Ethiopian Water Resources Management Proclamation (Proclamation No 197/2000)**

The proclamation gives mandate mainly to water sector to protect the water body from environmental pollution. In this regard Art. 8 sub "f" of the proclamation stated that "the supervising body prepares directives, in consultation with public bodies concerned, in order to ensure that water resources are not polluted and hazardous to health and environment". With regard to permission of the discharge of polluted water into water bodies Art. 8 sub "h" stated that "cause, in consultation with the public bodies concerned the issuance of quality or health standards which enables it to entertain an application for a permit to discharge or release polluted water into water resources".

The proclamation also prohibited the discharge of waste water into water bodies. In this respect, Article 13(2) of the proclamation stated that “any application for a permit to release or discharge any waste, which endangers human life, animals, plants and any living things, into water resources shall not be accepted. However, the Supervising body may accept the application requiring the applicant to release or discharge after having treated the pollutant”.

With regard to permission of discharging of waste water into water body the mandate should have to be given to environmental sector or there should be legally determined inter-governmental relation between environmental sector and water sector; however, there is no any legal ground which strength IGR between these sectors. In other hand if the proclamation prohibited the discharge of waste full water into the water body why this problem could not be controlled? Why factories released liquid waste into the rivers? These issues should be answered to get detailed into the existing problem.

#### **Solid Waste Management Proclamation (Proclamation No. 513/2007)**

The proclamation is intended to provide effective solid waste management system of urban areas through public and local governments’ participation. It gives direction to recycle some of the solid wastes in urban areas. According to art 7 of this proclamation “the manufacturer or importer of glass containers or tin cans shall develop and implement a system that enables it, on its own or through other persons, to collect and recycle used glass containers or tin cans. --- urban administrations shall ensure that pre- collection sites are designated to collect used glass containers and tin cans, and emptied periodically”. In other hand, the proclamation also prohibited the production of plastic bags which are not simply mixed with the soil. According to Article 8 of the proclamation it is prohibited to produce or import plastic bags having thickness of 0.003 and less than 0.003 millimeter.

The proclamation also puts an obligation on urban administrations to provide suitable environment for implementation of solid waste management programs. According to art 5 of the proclamation urban administration shall ensure the participation of lowest level of governments and local communities in planning and implementing solid waste management programs.

The proclamation included obligation of urban administrations in preparing safe waste disposal sites. In this regard, according to Article 14 of the proclamation, in line with federal

environmental standard urban administration shall ensure the proper construction and use of waste disposal sites. The urban administrations have an obligation to ensure waste disposal sites to be subjected to the environmental audits. Similarly, the proclamation stated that any waste disposal sites which is in construction or which needs any modification should have an environmental impact assessment. According to art 15 of the proclamation, urban administrations have a responsibility for ensuring an environmental audit on existing waste disposal sites. If the result of environmental auditing of waste disposal sites shows the waste disposal sites has adverse effect on human health and the environment the owner of the site has a responsibility to change the disposal sites.

With regard to “civil liability” the proclamation further stated the issues of liability in its provision. In this regard, art 16 of the proclamation stated that the owner of solid waste disposal site is liable for any damage causing to the environment and human health in its time of operation and closure and becoming free from liability is obtained when the victim himself or the third party who is not responsible to the owner of the project causes damage. However, this is not practical on government holding landfills. According to Degene (2012) there is no criminal liability on public projects since public projects are free from criminal liability by penal code.

In general, many environmental laws have been enacted to protect the environment from industrial pollution in Ethiopia. However, the existing environmental laws are not adequate enough to effectively implement the environmental protection programs in the country. In this regard, Dr. Hegena also argued that there are legal gaps in some aspects of industrial pollution. For instance, there are no legal frameworks for slag (which are not liquid and solid). Furthermore, there is no adequate legal framework for management and registration of industrial chemicals. The hazardous waste management of the country has not also legally bounded by legally enacted law. Issues related with lead, color, and mercury also do not have legally established frameworks<sup>9</sup>.

With regard to directives, the Director General of policy argued that the regulation should be enacted with three months of enactment of proclamation. However, there is a gap to provide regulations on time to implement the existing environmental laws. There is also legal gap in public participation. This issue is followed by many questions as the law does not define that

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<sup>9</sup> Interview with Dr. Ayele Hagen -Director General of policy and Legal Directorate of the Ministry 28/03/2018

who, and in what condition the public are consulted in environmental decision making. The legal framework in this regard lacks detail procedure for public participation in environmental decision making<sup>10</sup>.

According to policy director general, with regard to the issue of compensation there is polluters pay principle in the legal framework of the country. The law included payment of compensation for the victim of pollution. In addition, the proponent should restore the area which is polluted by their pollutant. The existing principle on the compensation issue is relied on the issue that compensation should be paid by compensation law; this created a gap to implement what is stated in general in the legal frameworks of environmental protection. In general, environmental cleanup, restoration and compensation are serious issues of environment which should be seen appropriately in the future<sup>11</sup>.

In addition, there is a gap in punishment of bodies that discharge pollutant into the environment. As the environmental pollution control proclamation states anybody which discharge pollutant into the environment will be punished 1000-5000 birr and/or imprisonment of not less than one year and not more than five year (in case of natural person) and 5000-25000 birr and/ or imprisonment of not less than 5 year and not more than 10 year (in case of judicial person). This punishment provision is weak if the polluter causes irreversible problem on environment and human being. In this regard, the Director General of Policy argued that the aim of punishment is to teach people not to do the same problem in the future. However, the proclamation takes many years and it needs amendment in line with economic and public conscious of the existing circumstance.

There is also gap in public participation in environmental policy formulation at federal government level. According to interview with the Ministry's Director General of EIA before enactment of environmental laws, there were public hearings in which different stake holders were consulted by standing committee of House of Peoples Representatives. However, since the country's system of government is parliamentary publics at large do not discuss on the issue rather it assumed that the representatives of public raise public voice in the process<sup>12</sup>. This

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<sup>10</sup> Ibid

<sup>11</sup> Ibid

<sup>12</sup> Interview with Mr. Shifera Negash- Director General of EIA of the Ministry 03/04/2018

questioned to what extent the public representatives raise the public concern under centralized decision making process at federal level. This hindered large parts of the public to discuss on issues of environmental policies and laws before its enactment by the parliament. In this regard, (Habtamu and Alemu, 2014:63) also argued that the political system of the country seems participatory; however, there is no adequate discussion on environmental issues among different stake holders. It is the federal government which plays the upper hand role in the formulation of the country's environmental policy. Most of the time policies are prepared at the federal level and go down to states and local governments for implementation without public participation and there is lack of empowering the public to take part in environmental decision making.

### **3.2.2. Federal Government's environmental Structure**

The Ethiopian government takes commitment to establish environmental protection authorities at federal, states and local governments' level. The country established Ethiopian Environmental Protection authority by Proclamation No. 9/1995. According to this proclamation the established environmental authority is responsible to council of ministers. With regard to powers and authorities of the environmental authority Article 6 of the proclamation states that: the authority is responsible to Prepare environmental protection policy and laws and after its approval follow up its implementation, prepare "directives and system" for assessing the impacts of the project on the environment, follow up and oversee its implementation, take regulatory measures for effective environmental protection, provide regulation for awareness of environmental protection, follow implementation of international treaties in which the country is a member and provide advice and technical support to regional state on environmental protection.

The 1995 environmental protection authority establishment proclamation also made an obligation for the establishment of "environmental council" consisting of different ministries. These members of the council are: Minister of Agriculture, Trade and Industry, Health, Mines and Energy, Water Resources, the general manager of the authority, Commissioner of science and Technology Commission, and assigned officials by the government who chaired the Council. According to this proclamation the environmental council shall have a regular meeting twice a year (every six months).

In addition, environmental protection organs are also established by proclamation no. 295/2002. The Proclamation also re-established the environmental protection authority. According to Article 6 of this Proclamation some of the power and responsibilities of authority are: coordinating the implementation of environmental objectives listed in the federal constitution and environmental policy of Ethiopia, prepare, review, update and cause preparation of environmental laws in consultation with environmental stake holders, establish EIA system for public and private projects when the project is subject to the federal licensing, review its EIA study report and audit and supervise its implementation, set environmental standard, establish environmental information system, coordinate, promote and carry out environmental research, prepare periodic report on the state of environment of the country, prepare directives for implementation of environmental protection laws and after its approval ensure its implementation, give advice and support to regions on environmental management, provide capacity building programs in the field of environmental protection programs.

The proclamation also re-established the environmental council at the federal level. As it is stated in Art 8 of the proclamation the environmental council shall have members including: the Prime Minister or his designate (Chair- man); members to be designated by the Federal Government, a representative designated by each National Regional State; a representative of the Ethiopian Chamber of Commerce, a representative of local environmental non- governmental organizations, and a representative of the Confederation of Ethiopian Trade Unions, and the Director General of the Authority.

With regard to responsibilities of the environmental council, Article 9 of the Proclamation stated that the responsibilities of the council is to “review proposed environmental policies, strategies, and laws, and issue recommendations to the government; based on report submitted to it by the Authority, evaluate and provide appropriate advise on the implementation of the environmental policy of Ethiopia; review and approve directives, guidelines and environmental standards prepared by the Authority”.

The Proclamation also included the need for establishment of “sect-oral environmental Organs”. In this regard, it makes mandatory for relevant government sectors to establish the “environmental unit” in their office to coordinate environmental protection with in the sector. According to Article 15 of this proclamation, all regional states have obligation to establish

regional state environmental authority. The regional states environmental agencies as per the same article include the following responsibilities:

1. *coordinating the formulation, implementation, review and revision of regional conservation strategies, and,*
2. *Environmental monitoring, protection and regulation.*
3. *Ensuring the implementation of Federal environmental standards or, as may be appropriate, issue and implement their own no less stringent standards.*
4. *Prepare reports on the respective state of the environment and sustainable development of their respective states and submit them to the Authority.*

The other commitment taken by the Ethiopian government is the promotion of the Environmental Authority into Ministry and becoming the member of the council of ministries. To this end, proclamation no. 916/2015 (“a proclamation to provide for the definition of powers and duties of the executive organs of the Federal Democratic Republic of Ethiopia”) established 25 ministries. Among these 25 ministries one of the ministries is the ministry of environment, Forest and Climate Change.

At the federal level the environmental structure is conducive to implement environmental program at federal level. However, the environmental structure is not similarly built at the regional states level. Some regional states established environmental protection Bureau, some of them established the environmental protection authority, in some regional states environmental activities are merged into other sectors activities and there is no independent environmental organ. Some regional states established the authority at the local government level and others do not it at the local level<sup>13</sup>.

In all regional states the structure does not stretch up to kebele level. At federal level, the ministry is departmentalized into branch of environmental protection and climate change and branch of forest in which the two branches are led by two state ministries. In addition, it is decided that the ministry should have third branch that is climate change which will be led by

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<sup>13</sup> Interview with Mr. Daud Mume- Director General of plan and Budget of the Ministry 02/04/2018

another state minister. The ministry is also trying to fulfill the required experts and it is trying to provide capacity building trainings to its experts. However, it needs a lot to work to go with current dynamics of the country<sup>14</sup>.

With respect to federal environmental council, there is no any experience of environmental council at federal level. All the interviewers“ at the ministry level could not have concepts about environmental council. So the structure of environmental council seems a principle on the proclamation rather than practice at the ground.

In terms of human power, there is lack of professional and skilled man power at federal level. There are no adequate and qualified experts to prepare scientific environmental report on the state of the environment of the country. There is also lack of environmental lawyers in the country which help implementation of environmental laws of the country. There is also high turnover of environmental experts because of low salary scale and other reasons<sup>15</sup>.

The environmental protection budget is increased from year to year. For instance, in 2016/2017 the assigned budget was 58 million, in 2017/2018 it was 62.8 million and the ceiling of 2018/2019 is also announced that it will be 67, 100,000. There are also different funds such as climate resilience fund. However, the budget is not adequate to perform environmental activities at the federal level. For example, recently the Sheka forest which has been registered by UNESCO faced a problem of fire damage. To manage the problem through scientific means there was no established fire brigade in the country for such kinds of environmental problems<sup>16</sup>.

### **3.2.3. Federal Intergovernmental Supervision of Environments**

The federal government focuses on trans-boundary environmental issues and huge projects such as industrial parks. It focuses on huge projects that have donor“s interest. Others are seen at the regional state level. The projects which get permission from the federal government are supervised by the federal government. Similarly, projects which are approved by the regional state are supervised by the regional state. However, the federal government has no mandate to reach the urban local governments. In this regard, there is no established formal relationship

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<sup>14</sup> Interview with Mr. Shifera Negash- Director General of EIA of the Ministry 03/04/2018

<sup>15</sup> Interview with Mr. Daud Mume- Director General of plan and Budget of the Ministry 02/04/2018

<sup>16</sup> Ibid

between federal government and urban local governments. The relation between federal and regional state is more of report relationship. The federal environmental body inspects the projects which are permitted by the federal and the regional states also act on the projects which are permitted by them. Beyond, reporting relationship there is no federal environmental oversight and intervention and taking measures on states and urban local governments<sup>17</sup>.

The federal government have also relationship with regional states in capacity building, it also present guidelines and proclamations to help environmental performance of regional states. However, the capacity building program is not enough to develop the performance of states and it is not need based and it does not based on scientific approach to identify the existing gaps in the regional states which needs capacity building program. In its capacity building program the federal government is limited to regional states capacity building and it does not address the capacity problem of the urban local governments. Most of the time the federal capacity building focuses on giving training to regional environmental officials assuming that the officials can built capacity of the environmental structure up to local governments. However, the existing turns over limited the capacity building program and the local governments are not benefited from federal capacity building in this regard. The federal structure gives capacity building training for regional states every three months. However, because of budget constraints from regional states the participants are very small and it only comprises 2-3 persons from each regional state<sup>18</sup>.

Furthermore, with regard to providing environmental research, in environmental issues sometimes the research is carried out in collaboration with different institutions at federal level. However, there is a gap in providing the research to the regional states and local governments to help effective implementation of environmental activities. There is structural gap to do such activities at federal level<sup>19</sup>.

With respect to environmental finance, the general director stated that the major source of environmental finance at the federal level is the government budget. There are some donors who give financial support to the federal environmental activities. For example, there are different

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<sup>17</sup>Interview with Mr. Shifera Negash- Director General of EIA of the Ministry 03/04/2018

<sup>18</sup> Ibid

<sup>19</sup>Interview with Mr. Shifera Negash- Director General of EIA of the Ministry 03/04/2018

projects of World Bank, GTZ and UNDP. Furthermore, the federal environmental sector can find other projects by designing different environmental projects at the federal level. Beyond capacity building and material support there is no budget and fund which is dispersed from the ministry to regional states and local governments. In some urban local government level there is source of fund called ULGDP which is provided by World Bank. In addition, at federal government level delegation of environmental activity was given to parallel sectors such as ministry of Agriculture, Industry, Transport, Electricity, Mineral and Natural Gas and Construction. However, these sectors are unable to perform the delegated environmental activities and the ministry is in a way to lift the delegated activities from these sectors. However, the ministry did not give delegation to regional state and there is no funding in this regard<sup>20</sup>.

In general, there is no formally established Horizontal and vertical IGR at the federal level among environmental sectors. There is weak coordination between environmental sectors at federal level. Similarly, the ministry has no formal IGR with environmental authorities of regional states. The relationship is mainly based on reporting system and there is no institutionalized IGR in this regard and there are no environmental oversights on regional states level by federal government<sup>21</sup>.

#### **3.2.4. The State of Federal EIA**

EIA is prepared by consultants who are licensed by the Ministry. The revision and approval process is carried out by the ministry. If it fulfills the required criteria it can get approval without any condition. If there are some criteria which can be fulfilled in the future it can be approved with conditionality. And if it does not fulfill the expected criteria at all it can be rejected from approval<sup>22</sup>. This kind of EIA process that is the consultants done EIA and the regional and federal environmental authorities approval is intended to keep the neutrality of EIA process (Degene, 2012).

Since the EIA study is done by independent consultants, it is free of political influences. The review process is also carried out by experts without political influences. The problem is that

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<sup>20</sup> Ibid

<sup>21</sup> Ibid

<sup>22</sup> Interview with Mr. Yohanes Ameha- EIA Expert of the Ministry 29/03/2018 and Mr. Shifera Negash- Director General of EIA of the Ministry 03/04/2018

some projects began implementation without having EIA and the challenge is its implementation process. The validity and content of EIA is checked through review process and field visit by the experts of the Ministry. With respect to skilled experts, there are 12 professionals on EIA at the ministry level from disciplines such as biology, chemistry, sociologist, geography, and etc. So the experts at the federal level are not adequate enough to carry out EIA review at federal level<sup>23</sup>.

In the process of preparation of EIA there are problems to follow principles and standards of EIA. There are non-ethical situations while studying EIA from proponent side. There are also situations where the EIA does not consider existing circumstance of the ground. Simply, some consultants download it from the internet and they make copy paste and bring it to the ministry for approval without public participation in the process. Even if the legal frameworks starting from federal constitution makes the public participation mandatory on impacts of the projects before implementation phase, in the process the public participation is very weak. To minimize the existing problems in EIA process the ministry tries to make supervision on consultants by seeing the structural arrangement at their office, and check how they keep documents at their office. However, the trial is not enough to solve the existing problem in preparation of EIA and in this case; the Ministry did not take appropriate measures on these consultants<sup>24</sup>.

With regard to public consultation, the expert of EIA also argued that there is gap in public consultation in the process of EIA. There is no public consultation guideline, there are no guiding questions in making public participation, which part of the society, how many and in what why the public is consulted lacks detail guide lines. As a result public consultation is weak in the process of EIA study at federal level<sup>25</sup>.

In other hand, Council of Ministers regulation no. 159/2008, the regulation to provide industrial pollution control, makes mandatory for every factory to provide annual report to relevant environmental organs on its environmental performance. In this respect, the interview with key informants at federal level shows that <sup>26</sup>there is no list (full profile) of pollutant industries at the federal level. This kind of trend is not known by the Ministry and it does not given attention as

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<sup>23</sup>Interview with Mr. Yohanes Ameha- EIA Expert of the Ministry 29/03/2018

<sup>24</sup> Interview with Mr. Shifera Negash- Director General of EIA of the Ministry 03/04/2018

<sup>25</sup>Interview with Mr. Yohanes Ameha- EIA Expert of the Ministry 29/03/2018

<sup>26</sup>Interviews with Ibid and Mr. Shifera Negash- Director General of EIA of the Ministry 03/04/2018

an environmental activity. This is resulted from the absence of environmental units or experts at the factory level, lack of giving attention to issues of environment and lack of awareness. In this regard, there is no any scenario where the Ministry takes measure on factories for failure of reporting. In this respect, the regulation lacks detail provisions to take appropriate measures on factories which are not reporting to the Ministry. In general, except supervision at the factory level by the ministry, there is no reporting system from factories to federal ministry of environment, forest and climate change.

With regard to the issues of accountability, EIA proclamation states that the proponent is accountable for making an offence on the environment. However, the interview with key informants shows that there is no accountability if unqualified EIA is wrongly approved by the government body. No one becomes accountable for doing wrong in this respect<sup>27</sup>.

With respect to intergovernmental relation in the process of EIA, the key informants stated that there is no any relation between federal government and urban local governments. The federal government has no mandate to get local governments beyond the regional states<sup>28</sup>. This shows absence of involving local environmental authority in review and approval process of EIA at federal level.

In general, there are different challenges in the process of EIA. There is no specific guide line for public consultation in the process of EIA. The owners of factories (proponents) lack commitment for implementation of EIA. There are also limited resource (budget and human resource) for effective implementation. Economic and social factors are also some factors which hindered to take action; because of job opportunity and economic circumstance of the country the action taken to correct the EIA is weak. There is also resource inefficiency; there is in no adequate scientific laboratory and there is no scientific base line which helps to take appropriate corrective actions on pollutants. There are also problems from the side of government projects since most of the governments projects come into implementation phase without having EIA<sup>29</sup>.

In general, the proponents do not implement environmental programs according to their environmental management plans. They lack commitment to assign necessary budget to

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<sup>27</sup> Ibid

<sup>28</sup> Ibid

<sup>29</sup> Interview with Mr. Yohanes Ameha- EIA Expert of the Ministry 29/03/2018

implement environmental activities at their disposal. The proclamation also gives only 15 days for public to discuss on the EIA study report. However, these days are not enough for public consultation and it should be amended<sup>30</sup>.

Besides, the proponents do not respect the time framework of authorization to finish their project rather they run the project according to their need. The follow up in this regard is also very weak. Time framework which should be given for construction of the project is not stated clearly and in a detail to bound authorization process. So, there is a gap in this regard as proponents do not construct projects on time rather they construct their project without re assessment of EIA study<sup>31</sup>.

### **3.2.5. Federal Compensation Schemes for the Environmental Victims**

With respect to compensation schemes of the federal government, environmental pollution control proclamation no. 300/2002 included a provision that any person who made environmental pollution on the environment should pay the cost of cleaning the environment. The proclamation also states that if the activity of any firm causes a problem on human health and environment, the environmental organs shall take measures to close or change the location of the firm to other areas. Furthermore, according to this proclamation the court may impose compensation upon firms if the environmental problem is irreversible. However, the interview with key informants at federal level shows that <sup>32</sup>the compensation scheme lacks detailed legal procedures to put it into practice. As a result, the implementation process is very weak. Besides, <sup>33</sup>the victims of industrial pollution in the country are not identified and their data and their characteristics are not known by the ministry and no one is compensated for being affected (no data existed) at the ministry level in this regard.

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<sup>30</sup> Interview with Ibid and Mr. Shifera Negash- Director General of EIA of the Ministry 03/04/2018

<sup>31</sup> Interview with Mr. Yohanes Ameha- EIA Expert of the Ministry and Mr. Shifera Negash- Director General of EIA of the Ministry 03/04/2018,

<sup>32</sup> Interviews with Dr. Ayele Hagen- Director General of policy and Legal Directorate of the Ministry, Mr. Yohanes Ameha- EIA Expert of the Ministry and Mr. Shifera Negash- Director General of EIA of the Ministry

<sup>33</sup> Interviews with Mr. Yohanes Ameha- EIA Expert of the Ministry and Mr. Shifera Negash- Director General of EIA of the Ministry

### **3.3. Regional Government of Oromia and Environment**

#### **3.3.1. Environmental Policy, Legal Frameworks and Structural Frameworks Under The Regional State of Oromia**

##### **3.3.1.1. Environmental Policy and Legal Frameworks of Oromia Regional State**

Since Ethiopia is a federal polite, regional states have a power to formulate laws which can be implemented in its control (Mellese, 2010: 10). The original power holder to enact laws on the issues of environment is the federal government. According to Article (51:5) of the federal constitution, the federal government has a power to formulate policies on utilization and conservation of land and other natural resources, historical sites and objects. As it is stated in Art (50:9) the federal government may give delegation to regional states some of its responsibilities. So, it seems that the regional states get a power to make environmental policies by delegation from the federal government. In general, for the purpose of this study in this section the researcher tried to look over Oromia Regional State environmental laws as follow.

To begin with regional state constitution, similar to the FDRE constitution, the 2001 amended constitution of Oromia Regional State constitution included important provision for environmental protection of regional state. According to the constitution, all peoples of the regional state have the right to participate in regional development and should be consulted with regard to policies and projects which affect their community (art 43:2). It also stated that all residents of the region have the right to a clean and healthy environment (art 44:1). Furthermore, under its environmental objectives (art10:7), of the constitution also stated that Government shall ensure that all regional residents live in a clean and healthy environment, the design and implementation of programs and projects of development shall not damage or destroy the environment, the people have the right to full consultation and expression of views in the planning and implementation of environmental policies and project that affect them directly.

#### **The Oromia National Regional State Environmental Impact Assessment Proclamation No. 176/2012**

The Oromia National Regional State Environmental Impact Assessment Proclamation No. 176/2012 contains all provisions which are included in the Federal environmental impact assessment proclamation. In addition, this proclamation included some stringent provisions

which are not stated in detail in Federal environmental impact assessment proclamation. To mention some of these provisions; for instance the proclamation prohibited implementation of other projects which are not consistent with the impact assessment study. In this regard, Art. 5:8 of the proclamation stated that “if environmental impact assessment report of a project has been submitted to the Bureau and has received approval, changing project to another type by a proponent shall not make him free from being subject to liability.”

With regard to monitoring Trans -regional Impact assessment, unlike the federal environmental impact assessment, this proclamation included bodies that monitor Trans -regional projects. In this regard, Art. 9:4 of the proclamation stated that “where the project is trans- regional, the Federal, regions, and other concerned bodies shall monitor its implementation”.

With regard to penalties, this proclamation included more stringent penalties than mentioned in the Federal Environmental Impact Assessment Proclamation. In this regard, the proclamation stated that if any person or legal body entered into operation without environmental impact assessment approval or present false information shall be penalized. In relation to this action legal person penalized not less than 50,000 and not more than 100,000 birr, managers shall be penalized not less than 2 years and not more than 5 years imprisonment and/or penalized not less than 10,000 and not more than 20,000 birr, natural person shall be penalized not less than 10,000 birr and not more than 20,000 birr. In addition, the proclamation included the punishment of advisors or any institution which are in charge of making wrong environmental impact assessment. In this case, legal persons shall be punished not less 30,000 and not more than 60,000 birr, managers shall be imprisoned not less than 3 years and not more than 7 years and/or punished by not less than 20,000 and not more than 30,000 birr, in the case of natural person the punishment shall be not less than 15,000 and not more than 30,000 birr.

Unlike the federal government environmental impact assessment proclamation, the Oromia regional state environmental impact assessment proclamation included about the liability of head and experts of environmental organs of the region. In this regard, Art. (19:3) of the proclamation stated that

*A head or an expert of Bureau at every level deliberately commits any acts which makes him benefits from environmental impact assessment process or benefits others*

*illegally from the process using his power or without giving due attention to the review of environmental impact assessment report and their happen to occur adverse impact on environment as a result of, he shall be liable to imprisonment for term of not less than one year, and not exceeding two years, or a fine of not less than ten thousand Birr and not exceeding fifteen thousand birr or both.*

However, does this provision functional in the implementation of the environmental programs in the regional state? This is also an issue which should be seen in the next empirical parts of this research.

The other important Proclamation that should be noted as legal framework in the Regional State of Oromia is Environmental Pollution Control Proclamation No. 177/2012. Most of the provisions of this proclamation are similar with federal environmental pollution control proclamation. The proclamation also has some provisions which are not listed in adequate in Federal environmental pollution control proclamation. For instance, the proclamation include about the issues of Organizations' waste management. In this regard to cite some provisions listed under Article 8:

- 1. Any Organization shall implement convenient and capable waste management system*
- 2. Waste disposal sites should be far from residential areas and anything that can be impacted by this waste disposal*
- 3. The Bureau , in collaboration with concerned body shall monitor organizations' waste management system*
- 4. Any organization shall have an obligation to dispose its waste on areas provided by the urban district administration.*

In practice, this was not applied as there is no any appropriate site prepared by the city administration. This is also an existing problem to put the provision into practice in the study area.

The proclamation also makes mandatory to Bureau to establish laboratory and also the bureau has a responsibility to give technical assistance to laboratories established at the factory level. Besides, the proclamation also stated about penalties with regard to government officials and

experts at all levels in the region. In this regard any head and experts who make offences shall be liable according to the proclamation.

Notably, the proclamation states that it is mandatory to the Bureau to work in collaboration with other regional states with regard to trans-regional impacts which moves in both directions. In addition, the proclamation underlined the need to work with Addis Ababa with regard to wastes which is discharged into the regional state.

With regard to regional environmental legal frameworks, there are a number of environmental laws at the regional state level; the problem in this regard is to put these proclamations into practice<sup>34</sup>. There are poor actions to take legal measures on the pollutant firms fearing that it will cause unemployment of workers of the industries and social crisis may happen as a result of this action. As a result of this fear at the ground pollution is increased from time to time<sup>35</sup>.<sup>36</sup>There is also lack of commitment and awareness to put the existing laws into practice. There is also lack of balancing development and environmental protection from the government side; this is resulted in weak support for environmental issues. In other hand there was a lack of strong institution with full capacity to perform environmental activities in effective manner. Until recent time, there was no environmental structure at the regional level. It was under different Bureaus as one branch and then the office of environmental authority were also established which did not have adequate capacity and environmental structure at the local level. Until recent time when the investment is given the issue of environmental protection was not taken into consideration rather the main consideration was foreign currency and job opportunity. But know a day, the environmental authority at the regional state level is a member of regional investment board and there is a progress to see the issues of environment before the project come into implementation phase.

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<sup>34</sup> Interviews with Mr. Shumi Negash-General Director of climate change directorate of the Oromia regional state environmental authority 19/03/2018 and Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

<sup>35</sup> Interview with Mr. Shumi Negash-Director General of climate change Directorate of the Oromia regional state environmental authority 19/03/2018

<sup>36</sup> Interview with Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

In general, most of the environmental problem is resulted from failure to implement the environmental laws and in some respect the environmental laws also are not adequate to implement the environmental activities. For example, in case of punishment, the law does not include adequate procedure and there is no specific regulation to apply polluters pay principle. There is a problem of providing environmental regulation and directives; regulations and directives are not provided on time to help the implementation of environmental programs at the local governments“ level<sup>37</sup>.

Recently, at a regional state level there is a good start to take some measures on highly pollutant firms which have serious public concern. The authority began to take measure up to closing pollutant factories, however, the process needs a lot to work. There is problem of awareness on environmental issues and lack of commitment on environmental protection both in government holding and private projects. Even foreign investors who are coming from developed countries do not have concern on environmental issues of the country. They argue that „until you become developed you should not bother for issues of environment“ and they are also highly polluting the environment<sup>38</sup>.

In other hand, most of regulations and directives are at a draft stage which hindered the implementation of environmental laws. This is resulted from the fear that if the directives and regulations are provided there are few factories which are environmentally friendly and most of them are not in a position to fill the required criteria and the problem can happen. If there is stringent environmental action in this regard there is fear that industries flow to other countries and there might be less flow of industries towards the country. That is why the government is reluctant to provide appropriate regulations and directives on time to help the implementation of environmental programs<sup>39</sup>.

Furthermore, there is no adequate public participation on environmental decision making both at the regional state and federal government level. The existing laws are top down and do not involve public at large in the process of its enactment. When the law is enacted it is through the Parliament that the standing committee and Parliament discuss about the issue and ratify it

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<sup>37</sup>Interview with Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority20/03/2018

<sup>38</sup> Ibid

<sup>39</sup>Interviews withMr. Shumi Negash-General Director of climate change directorate of the Oromia regional state environmental authority 19/03/2018

without adequate public consultation. Even the federal government does not adequately consult the regional state environmental structure and there is rare discussion before enactment of environmental laws in which the comments raised by the regional states were not included in the enactment of federal environmental laws<sup>40</sup>.

### **3.3.1.2. The Oromia Regional State Environmental Structure**

The Environmental protection institution in Oromia Regional State which was first established in 1993 was termed as *the Natural Resource Development and Environmental Protection Bureau*. However, in 1995 it was merged with Bureau of agriculture. Then in 2001 environmental protection body in Oromia Regional state was established by Proclamation No. 43/2001 (Degene 2012). The 2001 proclamation established *Oromia Natural Resource Development and Environmental Protection Authority*. With regard to environmental structure, the proclamation stated that the Authority's structure consists of: the natural resource development and environmental protection council, General and Deputy Manager as well as other employees. According to this proclamation the council is chaired by the regional state president in which different sectors of the regional state such as head of women and youth association as well as general manager or representatives of the environmental authority are members. As it is stated in Art 8 of the proclamation the council shall have the responsibility to review policy in the matter of natural resource development and environmental protection and to evaluate directives and programs prepared by the authority which are submitted to the executive committee. Later in 2002 regional state Environmental Protection Office was established by regulation No. 28/2002.

The environmental structured was also changed by proclamation No. 147/2009. The Proclamation established the Oromia regional state *Bureau of Land and Environmental Protection*. As it is stated in the proclamation the Bureau shall have branch offices at Zonal and Woreda and Urban local government levels. The proclamation also stated powers and duties of the Bureau. According to Article (5) these powers and duties of the Bureau from environmental point of view are: formulating regional environmental policies and implement or make it to be implemented after its approval, resolve conflict on environmental protection in collaboration with concerned organs, prepare environmental standard and after its approval regulate and follow up its implementation, regulate and follow up development activities not to cause damage on the

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<sup>40</sup> Ibid

environment, regulate the disposal of different pollutants and waste materials from factories and cities not to pollute the environment and cause to be taken appropriate action if it caused damage on the environment, collecting, storing, analyzing and administering environmental data and information and make it ready to use, make environmental audits on the liquid and solid waste disposal management by factories and industries not to cause damage on environment, promotion of public awareness on environmental protection, communication and establishing relation with concerned bodies on issues of environmental protection and controlling damaging effects on environment and living things and taking corrective measure or force it to be corrected

Likewise, the Oromia land and environmental protection Bureau latter changed into rural land and environmental Bureau by proclamation No. 170/2012. Starting from the last year the rural land and environmental protection Bureau is dissected into two and one of it becomes the Oromia regional state environmental, Forest and Climate change Authority.

As it is observed from the above statements, the environmental protection institution of the regional state lacks structural stability. The structure of the institution was changed several times since its establishment. In this regard, the researcher argues that the unstable structural change of the environmental protection institution has an impact in the environmental performance of the regional state environmental policies and programs.

With regard to regional environmental structure, the environmental protection authority is established from regional state to Woreda and urban local government. So the structure is effective for implementation of environmental problems at regional state level. However, there is gap in filling the authority's structure by adequate man power because of budget constraints. With regard to its quality there is improvements in having environment related trained experts at the regional level. But at local level there is lack of adequate and qualified human powers; this is a problem to effectively implement environmental programs at the local level<sup>41</sup>. According to the vice Director of the authority, there is a great problem of human power. The regional environmental structure is operating with only 18% of human power at its disposal, this questioned that to what extent this power implement the intended environmental programs. This problem exists at all levels; zonal, woreda and urban local governments. For example, out of 36

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<sup>41</sup>Interviews with Mr. Shumi Negash-General Director of climate change directorate of the Oromia regional state environmental authority 19/03/2018

needed professionals at woreda level, there are only 4 experts performing environmental activities at the woreda level. Similarly, there are no adequate experts at regional state level to review EIA. The existing professionals to review EIA at regional state are only 3 experts, this creates a significant impact on quality of review of EIA since the EIA is reviewed by limited number of experts at regional state level<sup>42</sup>.

With regard to environmental budget, the regional state allocate annual budget to the regional EPA for implementation of regional environmental policies and program. In addition, there are funds which are obtained from NGOs such as RED+ and others. However, the budget which is assigned to EPA is not adequate to effectively perform regional environmental programs. The authority lacks budget to build capacity of environmental authority at local government levels and to fill the existing gaps in human power at regional state level. Even if NGOs run projects by providing fund, the coverage of fund is very limited and covers only few weredas<sup>43</sup>.

With regard to the environmental council, according to key informants' interview at regional state, in practice the environmental council at the regional state level is very weak and is not functional at all. There was no any environmental decision which was passed by the environmental council at regional state level. The weak institutionalization of environmental council is the result of lack of commitment of political leadership, lack of awareness and because of the attitude that the issue of environment should be raised after the country is developed presents in the mind of regional leaders<sup>44</sup>.

### **3.3.2. Regional Environmental Supervision: Regulation, Monitoring and Evaluation**

Even if there are gaps in this area, the authority focuses on the pollutant factories and in collaboration with the local government consult people about the environmental problem of the area and gives feedbacks for those pollutant factories. The existing gap in this regard is the authority did not present the case before court, there is no compensation practice for the victims and there is no effective work on the rehabilitation of the environment by these factories. Most of

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<sup>42</sup> Interview with Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

<sup>43</sup> Interviews with Mr. Shumi Negash-General Director of climate change directorate of the Oromia regional state environmental authority 19/03/2018

<sup>44</sup> Interviews with Mr. Shumi Negash-General Director of climate change directorate of the Oromia regional state environmental authority 19/03/2018 and Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

the time the authority gives advise rather than taking appropriate legal measures on pollutant factories, this makes difficult to decrease the environmental impacts of factories<sup>45</sup>.

With regard to providing regulation, most of the time the federal government is not so much active to provide timely environmental regulations which help the performance of environmental programs at regional state level. Since most of environmental policies lack specific regulations and directives from the federal government it is difficult to state to implement the environmental policies at regional state level. As a result, the regional state also is not active to provide timely regulations which help the urban local governments to implement the environmental programs at the local level<sup>46</sup>.

Besides, the interview with key informants at the regional state level shows that there is no coordinated and institutionalized intergovernmental relation at the regional state level among environmental stakeholders sectors. It is only when the public raise complains on environmental issues these sectors together try to see and find solution for environmental problems. Thus, there is no sustainable coordination among the environmental stake holders sectors to protect the environment from industrial pollution<sup>47</sup>.

With regard to the issue of supervision, most of the time, the regional environmental authority tries to supervise environmental performance of factories by making oversights on existing factories at urban local government level. The authority's supervision on the environmental performance of urban local government is mainly relied on report system and periodic evaluation of report at the regional level. There is gap in supervision by making oversights the actual performance of the local environmental authority at the ground<sup>48</sup>.

In terms of capacity building, the regional state environmental authority tries to provide capacity building programs for experts performing activities at the regional level. However, for local government the capacity building program given by the authority is very weak. Because of the

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<sup>45</sup>Interview with Mr. Shumi Negash- General Director of climate change directorate of the Oromia regional state environmental authority 19/03/2018

<sup>46</sup> Ibid

<sup>47</sup>Interviews with Mr. Shumi Negash- General Director of climate change directorate of the Oromia regional state environmental authority 19/03/2018 and Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

<sup>48</sup>Interview with Mr. Shumi Negash- General Director of climate change directorate of the Oromia regional state environmental authority 19/03/2018

lack of budget there is no adequate capacity building activity to enhance the environmental performance of urban local governments. So there is a gap of capacity of environmental professionals at the local government level<sup>49</sup>.

With regard to intergovernmental relation, the result of interview with key informants at regional state shows that there is no institutionalized IGR between federal and regional state governments in environmental protection. The relationship between the two levels of government is based on the mandate given to them by proclamation. Both levels of government may together perform supervision on firms that is causing pollution, otherwise supervision and taking measure on environmental issue is the mandate of the regional government authority. The environmental performance report is given to the federal government through office of regional government president. Besides, when the federal environmental authority asks the regional environmental authority for a report by letter, the authority gives report to it. There is also a common stage every six month to see performance report. In general, there is no formally established IGR between the federal and regional authority in the environmental issues<sup>50</sup>.

In addition at the regional state level, horizontal IGR among environmental sector is weak. The relationship of these stake holders is based on focal persons of these environmental stake holders sectors which are organized by the environmental authority. In this regard, there is a gap of coordination among these stake holders and there is a gap to see the performances of the stake holders. At the level of leaderships of the environmental stake holders there is no established formal IGR and there is no established body to coordinate IGR among these environmental sectors<sup>51</sup>.

In general, according to vice director of the regional environmental authority, there is no institutionalized IGR between regional states in environmental protection issues rather there is informal relationship in which regional states receive experience from each other. With the federal government the relationship is based on giving report and capacity building program.

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<sup>49</sup>Interviews with Mr. Shumi Negash- General Director of climate change directorate of the Oromia regional state environmental authority 19/03/2018 and Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

<sup>50</sup> Interviews with Mr. Shumi Negash- Director General of climate change directorate of the Oromia regional state environmental authority 19/03/2018 and Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

<sup>51</sup>Ibid

With regard to capacity building program of the regional state there is progress from federal government side but the capacity building program is not demand driven. According to Mr. Shumi, the regional environmental authority also tries to cooperate with academic institutions such as Adama University and other stake holders in environmental protection issues. However, the collaboration lacks consistency and it is visible when the environmental problem is happen in the regional state<sup>52</sup>.

The regional environmental authority has a mandate to oversee the environmental performance of factories and it has a mandate up to closing the factories when the factories cause environmental pollution. In recent time the authority tried to take measure on pollutant factories, this resulted in closing of nearly 20 factories. For example, many plastic factories, tantalum factory, china over sea and other factories are closed by the recent movements of the authority. With regard to the capacity of the sector, the authority has a problem of capacity and budget to effectively perform its environmental activities. The capacity building is not enough because of the existing shortage of budget, which impacted the implementation of regional environmental programs<sup>53</sup>.<sup>54</sup> Recently, there is progress to take necessary measures to curve the existing environmental pollution; however the function is not enough to solve the existing problems in this regard.

In general there are different challenges which impacted the supervisory role of the regional environmental authority. According to key informants interviews at the regional state level, capacity and budget constraints are the major problems which impacted the supervisory role of the regional environmental authority. The authority does not have adequate laboratory which makes difficult to check the factories performance within the standard permitted to it by the authority; this hindered to take appropriate corrective measures on pollutant firms. In addition, the environmental awareness of stake holders is weak and hindered the effective performance of the stake holders. There is also a problem of giving priority to environmental agenda in the development process of the regional state rather the priority is given to the economic development at the cost of the environment. Since the country is poor it needs huge investment

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<sup>52</sup> Ibid

<sup>53</sup> Ibid

<sup>54</sup> Interviews with Mr. Shumi Negash- DirectorGeneral of climate change directorate of the Oromia regional state environmental authority 19/03/2018

to move out of this situation. As a result the government gives much attention for economic development than environmental issues<sup>55</sup>.

### **3.3.3. The Status of Regional EIA**

Full EIA is reviewed and approved by the regional environmental authority. The authority gives comment if the studied EIA has a problem for improvement. If the problem has high negative impact on the environment it makes the proponent to change the site. The document is prepared outside the government office without political bias. Now a day the review and approval process is also carried out by professional experts of the authority without political interference. With regard to quality of the project there was a problem of quality of EIA. Previously, for example the consultants present for hen production the EIA which was done for metal products. Now this is improved while the EIA is prepared. There is also a problem to present the actual impacts of the projects by moving to the area where the project will be implemented. Most of the consultants make copy paste to prepare EIA of the new project from the previous EIA study simply by sitting in their office. In this line, most of the time the Zonal and local governments raise complain that they did not see consultants to study the specific circumstance at the ground<sup>56</sup>.

<sup>57</sup>The process of EIA lacks adequate consultation of potential victims and concerned public. Consultants are not committed to consult publics and victims at large rather they try to attach to the list of the document which are not relevant for the study of EIA. There is some information that consultants get stamp of Kebele administration through corruption to stamp on the list of participants without making adequate public consultation on the study report of EIA.<sup>58</sup> The environmental stake holders also are not adequately consulted in the studied document before the project come into implementation. The absence of regulation and directives on public participation is also one of the factors for the weakness of public participation in environmental decision making.

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<sup>55</sup> Interviews with Mr. Shumi Negash- DirectorGeneral of climate change directorate of the Oromia regional state environmental authority 19/03/2018 and Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

<sup>56</sup> Interview with Miss Sanait Dinka- Expert of EIA of oromia regional state environmental authority 21/03/2018

<sup>57</sup> Ibid

<sup>58</sup> Interviews with Mr. Shumi Negash- DirectorGeneral of climate change directorate of the Oromia regional state environmental authority 19/03/2018 and Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

There is no data of industries which are fully implementing the standard EIAs in the region. In addition, there is no compiled data of pollutant industries at the regional state level. With respect to reporting system, there is no practice of reporting environmental audit to the regional environmental authority by factories. In this regard, failure to report to the authority does not followed by punishment and no one has been punished in failure to report to the regional environmental authority<sup>59</sup>.

With regard to implantation of EIA, there is huge gap between the existing law and implementation at the ground. There is no significant difference between factories which have and do not have EIA document in the implementation process. Most of the factories do not bother about the issues of implementation. Most of it in principle have prepared EIA document, however, most of it do not know where the document is. So mostly there is no difference among the factories in the implementation phase. In addition, there is no awareness on the issue of report from the factories side. The proponents see EIA only for requirement of loan from the bank and for collateral issues. In general, failure of implementation of EIA is resulted from lack of awareness, lack of adequate supervision and lack of enforcement of the existing law<sup>60</sup>.

With respect to accountability issue in EIA, the Oromia National Regional State EIA proclamation No. 176/2012 states that if head or experts of environmental Bureau knowingly commits an offence in the process of approval of EIA to benefit from it or to benefit others illegally and if they are reluctant to environmental study report during its approval and if adverse impacts happen as a result of such activity they shall be accountable. However, according to key informants' interview at regional state level, <sup>61</sup>in practice if the experts or officials wrongly approve unqualified EIA, there is a possibility to re prepare EIA by consults. There is no accountability for approving unqualified EIA by the authority. As a result, no one has been accountable for wrongly approving EIA. So the issue of accountability in this regard remains principle rather than practice at regional state level.

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<sup>59</sup> Interview with Miss Sanait Dinka- Expert of EIA of oromia regional state environmental authority 21/03/2018

<sup>60</sup> Interview with Bekele Wakjira- higher expert of environmental control and supervision of Oromia regional state environmental authority 21/03/2018

<sup>61</sup> Interviews with Mr. Shumi Negash- DirectorGeneral of climate change directorate of the Oromia regional state environmental authority 19/03/2018 and Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018, Interview with Miss Sanait Dinka- Expert of EIA of oromia regional state environmental authority 21/03/2018 and Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018

### 3.3.4. Regional Compensation Schemes for the Environmental Victims

In principle, the polluters should pay for polluting the environment. There should be appropriate compensation for polluting water, air, plants, animals and human beings. In practice, there is difficult situation to implement „polluters pay principle“; the process needs adequate laboratory at the local government levels to prove damage caused by pollution of industries. Because of difficulty to bring concrete cases before the court addressing the issue is becoming very difficult. Sometime even if it is too small, through dialogue there are some compensations practices at urban local governments for death of cattle; for example, in Sebeta , Mojo and other areas<sup>62</sup>.<sup>63</sup> Mostly there is no action taken on issue of compensation beyond closing some pollutant factories. There is no any compensation action for polluting air, water, soil and etc. As a result, there is no compiled data which show victims of industrial pollution at regional state level. Besides, there is no adequate and detail research which shows the data of victims at the regional state level by the regional environmental authority. The victims of industrial pollution are not known/ the actual number of victims is not identified. Besides, there is no legal ground for compensation of victims at regional state level.

In general, with regard to implementation of environmental policies in the country, there are huge variations between environmental policies and implementation at the ground. The implementation of environmental policies lacks environmental management programs and enforcement of the existing law. Besides, there is a weak capacity of environmental organs. There is also a weak oversight in environmental performance and the data on environment is not adequate to design improvement programs in environmental issues. The Experts of environmental authorities also lack capacity to guide and consult during EIA process. There is also lack of awareness on environmental impact assessment as some considered the environmental impact assessment as an impediment to development (E. César and A. Ekbom, 2013). There are also different limitations in the process of EIA. Some of these limitations include lack of selecting criteria for selecting projects which need and does not need EIA, lack of criteria for defining impacts of the project, lack of developing appropriate standards for

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<sup>62</sup> Interviews with Mr. Shumi Negash- Director General of climate change directorate of the Oromia regional state environmental authority 19/03/2018

<sup>63</sup> Ibid, Mr. Bona Yadesa- vice Director of Oromia regional state environmental authority 20/03/2018 and Bekele Wakjira higher expert of environmental control and supervision of Oromia regional state environmental authority 21/03/2018

reviewing EIA report, reviewing checklist, primary environmental examination, auditing procedure and auditing checklist<sup>64</sup>.

Lack of implementation in environmental policies is the existing weakness in Ethiopian environmental management. According to E. César and A. Ekbom(2013:12) “Although progress has been made and environmental issues are stated as priority in many policies, there is lack of implementation, and enforcement needs to be strengthened”. Even if different efforts has been carried to protect the environment, the practice of environmental protection of the country is still at its “infant stage” because of focus on economic development rather than balancing economic development with environmental protection. There is also lack of political commitment from the government side, lack of adequate staffing, lack of capacity of environmental sectors, lack of appropriate system of environmental practice and weak coordination among environmental sectors (Mulugeta, 2012).

With respect to the roles of the court, the Ethiopian environmental laws give a mandate to the court to decide on the bodies that cause pollution. However, administrative decisions in Ethiopia are not reviewed by courts. There is no legal framework which gives an opportunity to review administrative decisions by the court. For instance, environmental policies of Ethiopia do not include the accountability of environmental authorities for doing wrong decision on the environmental issue. Though the court in Ethiopia can play significant role in the implementation of environmental policies by exerting its influence in curving environmental wrong doing, the court role is very weak in this regard. This problem may be resulted from lack of cases presented to it or because of weak judicial performance in supporting environmental protection.<sup>65</sup>

There is a problem of giving priority for issues of environment by investment commissions both at the federal and regional state while investment is carried out (R. Mwebaza et al, July 2009). There is also a problem of preparing appropriate environmental standards and shortage of skilled man power in the implementation of EIA in Ethiopia. There is also a problem of awareness on

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<sup>64</sup><https://www.iaia.org/pdf/case-studies/EthiopiaProject.pdf>

<sup>65</sup>(<https://www.ju.edu.et/jlaw/sites/default/files/5%20Dejene%20EP.pdf>).

environmental laws among different stake holders. Stake holders at woreda and zonal levels do not have adequate awareness on environmental laws.<sup>66</sup>

Arguably, the environmental authorities at all levels of government lack capacity to implement the existing environmental programs. The study by Kalbesa (2012:21) also witnesses that there are institutions of environmental protection and different sectors are responsible for environmental protection and there is a problem of coordination between these stake holder sectors.

### **Conclusion**

The pre 1991 environmental policy of Ethiopia was mainly based on the natural resources protection of the country. The destruction of forest resources during the imperial era called for huge state led environmental program of the Derg regime. In the Derg period, a vast rural land was covered by forests under the forestation program of the central government. However, the environmental policies and programs were highly centralized and ignorant to rural communities’ participation and highly characterized by “top down” system of environmental management in which a huge hectares of land were confiscated from farmers without considering their interest.

After the fall of the Derg regime, there are significant improvements in environmental protection of the country in terms of enacting environmental laws. A number of environmental laws have been enacted both at federal and state levels. In principle, the environmental laws have been enacted to bring suitable environment for human and other biotic life. However, the practice reveals that the implementation of environmental policies and laws of Ethiopia are at the weakest position. The environmental laws are found too broad requiring detailed and specific regulation and directives for its implementation. But there hardly are adequate regulations and directives for environmental policy implementation both at Federal and Regional State levels.

The environmental laws of Ethiopia are inadequate on the issues of public participation on environmental decision making. As a result, there is a weak public participation in environmental decision making at both federal and regional state level. Besides, there is weak involvement of regional states’ environmental authorities on the formulation process of environmental laws at federal level before its enactment by the federal parliament. In addition, the issue of

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<sup>66</sup>(<https://www.ju.edu.et/jlaw/sites/default/files/5%20Dejene%20EP.pdf>).

compensation of the damage made by different projects is not clearly stated in the environmental laws of the country. Furthermore, there are no legally enacted regulation and directives for certifying and registration of consultants of EIA and there is no formal procedure to review license of consultants at federal level. Besides, there are no standards prepared for both water and air quality and there are no legal frameworks for pollution which are not liquid nor solid. Likewise, there are no legal frameworks for management and registration of industrial chemicals.

Institutionally, the environmental protection authorities are already established at both Federal and Oromia regional state to coordinate the environmental protection activities. Interestingly, environmental councils are established at both Federal and Regional State levels to support the environmental protection activities. Also, different environmental sectors are given specific environmental mandates while performing their regular activities in their sect-oral scopes. Nonetheless, the environmental institutions at both levels of governments by large suffer from lack of capacity expresses through shortages of skilled manpower and financial resources. The environmental institution also lack adequate logistics such as well-established environmental laboratories at both levels of government. There is also high turnover of environmental professionals at the federal level.

Besides, there is weak coordination both horizontally and vertically among levels of government in the implementation of environmental programs both at federal and regional state level. For example as it is mentioned in different literatures there is a weak coordination between the federal environmental body and investment commission while giving investment license. In addition there is also weak intergovernmental relation between the federal environmental body and the regional states environmental authority in the performance of environmental activities. So, there is no formally established intergovernmental relation both at federal and Oromia regional state level. The relationship between regional state and federal government is based on only reporting relationships and there is no federal environmental oversight on regional state. Similarly, there is no established formal intergovernmental relation among regional states on issues of environmental protection. In addition, there is no formally established intergovernmental relation between Oromia regional state and urban local governments' environmental authorities. So, both horizontal and vertical IGR is nonexistence in Ethiopia on environmental protection issues.

With regard to capacity building, the federal government is trying to provide regional states to provide capacity building training but it is inadequate and is not need based. The capacity building program of the federal environmental authority is limited to the regional states and it does not address the capacity problem of urban local governments' environmental authority. Besides, the capacity building program by the regional state is weak and did not support the enhancement of capacity of environmental authorities at the urban local government level and the authority is also weak to put pressure on political leaders to give institutional support for environmental authorities at urban local government level. There is also weak gap in providing scientific environmental research from federal government side to improve implementation of environmental activities at regional and urban local government levels. Besides, there is no scientific environmental baseline to enhance environmental protection in the country.

The finding of this research also shows that, there is no accountability in environmental performance both at federal and regional state. There is no reporting trend on the result of environmental audit by factories to both regional state environmental authority and the federal ministry. There is no list of pollutant industries at both levels of government and there is no organized data of factories that have standard EIA and environmental management plan. Besides, no factories are penalized by not having and not implementing EIA, no one becomes accountable from the government side by approving unqualified EAI at both levels of government. In addition, there is no any factory which became accountable for polluting the environment and there is no any consultant which became accountable for doing unqualified EIA at both levels of governments. Furthermore, there is no any case at both federal and Oromia regional state which was presented before court. Besides, there is no any concrete case both at federal and regional state which shows the practice of compensation for being polluted by firms. In this regard, there is no any complied data both at federal and regional state level which shows the victims of environmental pollution and there is no practice of compensation at both levels of government.

With regard to EIA, at both federal and regional state there is a problem quality while EIA is prepared. There is a problem of including the actual circumstance of the area where the project is built. In the process there is lack of adequate consultation of potential victims and concerned public and there is no specific procedure both at federal and regional state on public consultation of EIA. Besides, the environmental stakeholders are not adequately consulted both on the

regional and federal EIA. There is also a gap in implementation of EIA and environmental management plan at factory level because of lack of awareness on environmental issues, lack of commitment at factory level and lack appropriate supervision by the environmental authority at both levels of government.

In general, environmental laws have been enacted at both levels of governments to protect environment from environmental pollution. Besides, environmental institutions are established at federal and regional state level. However, the practice needs a lot to work from all government levels and needs political commitment of the government to implement the existing laws.

## CHAPTER FOUR

### **Evaluating the Environmental Policy Implementation in the Burayou City Administration**

#### **Introduction**

This chapter provides analysis and presentation of data gathered in the field work specifically on environmental issues of the city of Burayou. In this chapter, the researcher has used different sources of data; key informants interview at the city level, focused group discussion, interview at the factories level, own observation and questionnaires which are gathered from public in the city of Burayou. This chapter presents issues of environmental problem of the city of Burayou. It discusses on the causes, sources and status of industrial pollution of the city and on the challenges of solid waste disposal site and the state of EIA in the city of Burayou. Lastly, in the conclusion part of this chapter the level of governments which are responsible for existing industrial pollution of the city are discussed. In general, the analysis of the data of the study is presented as follow.

#### **4. The State of Environmental Problems in the City of Burayou**

##### **4.1. The Causes, Sources and Status of Industrial Pollution in the City of Burayou**

The rapid expansions of industries, in the city of Burayou have benefited the residents in various ways. The public get product of these factories with lower cost in its area. It has created jobs for the youth, and infrastructures for the people around the factories. The public get product of these factories with lower cost, and the people living around the industries got economic benefits from house renting for hotels, shop, and bank and for residence of industrial workers. Some factories also provide clean water services for the communities living around industrial areas. It also helped the communities to get different skills while working in these factories<sup>67</sup>.

However, the industries in the city have been causing environmental pollution. According to key informants<sup>68</sup> and FGD<sup>69</sup> there are different factors contributing to environmental and industrial pollution in the city. These factors include; low awareness on environmental issues from public,

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<sup>67</sup> Tariku Birasa- From office of investment and Aschalew Biru- from office of workers and social affairs on FGD held at the city level 28/02/2018

<sup>68</sup> Yeron Tekalegn-EIA expert of the city's environmental authority, 23/02/2018, Bayisa Ketema-Head of the office of Mayor of Burayou city, 26/02/2018, Desalegn Tafa-Head of the environmental authority of the Burayou city, 08/03/2018,

<sup>69</sup> Gebeyo Debisa- from health office, Guta Hambisa- from office of city council, Tariku Birasa- from office of investment, Aschalew Biru- from office of workers and social affairs, Focused group discussion held at the city level on 28/02/2018

government and owners of the factories, lack of commitment to solve the existing problem from the side of environmental stake holders, lack of discussion and dialogue with owners of factories on issues of environmental protection, lack of giving appropriate attention for environmental issues by the city administration, lack of commitment from the side of factories owners as its main focus is profit maximizing by neglecting environmental issues. The factory owners do not change the studied EIA into practice rather they see EIA document as a criteria for getting permission of trade and investment and loan. The other problem is lack of strong supervision and taking corrective measures on pollutant firms by the city's environmental authority.

Improper allocation of industries in residential areas in the city also contributed for the problem of industrial pollution in the city. Before establishment of industrial zones at the city level, many industries were established in residential areas. Specially, many of plastics, shoe, cosmetics, soap, food processing, printing and packaging and etc are located in residential land use areas. According to the data given from the city's investment office out of existing factories, 261 of the factories are established in the residential sites. According to Miss Yeron, an Expert of EIA and Mr. Bayisa Ketema, head of the Mayor Office, these factories release wastes into the area without significant treatment. Some factories pollute air while others cause sound pollution which highly disturbs the residents. The residents have complained the savior problems of bad odor, smoke, sound pollution, water pollution/river pollution etc that have affected the health condition of the local community. In this regard, the researcher has got <sup>70</sup>public petition on Selam cosmetics factory located in the Leku Keta Kebele which was signed in 2012 (See the public petition in appendix) and submitted to Leku Keta Kebele. In this letter, the public raised that the factory was established in residential site by violating the city's land use plan. According to this public letter trade and industry office also gave license without considering the land use plan. This causes health impact on children and the public themselves living around this area. However, until this time there is no any solution which is given to the public in this regard neither by the city's environmental authority nor the city administration.

<sup>71</sup>Previously, environmental protection was not an agendum of the city administration and that was the reason why industries wrongly established in residential areas. In this line, the

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<sup>70</sup>public petition signed in 2013, written to Leku Keta kebele

<sup>71</sup>Mr. Bayisa Ketema- Head of the office of Mayor of Burayou city, 26/02/2018

establishing of industries didn't follow the land use plan of the city. It has been a difficult exercise for the city to relocate the factories according to the Master Plan of the city.

<sup>72</sup>The city administration tried to solve the problem by forcing these factories to have treatment plant to reduce its impacts on residents. However, the progress in this regard is very weak and the problem remained acute. Even if there is no progress in developing treatment plants, the city prioritized treatment plants rather than relocating it to the industrial zone of the city. Relocation of these factories needs vast land and resource which is beyond the capacity of the city administration that is why the priority is given to the treatment plant. The factories also want to keep both lands if other land is given to them in industrial site of the city. In nutshell, the factories are pollutant and failed to respect the master plan of the city.

<sup>73</sup>The city council did not give attention to issues of environmental protection, as it did not perform any environmental supervision and follow up at the city. <sup>74</sup>The other factor that contributed to the industrial pollution in Burayou is unfair system of giving license and certifying firms. In this case, local health sector and the federal ministry of health gave certificate of competence without considering its impacts on the environment.

The informants further posit that there have been huge coordination gap among environmental stakeholders. Neither environmental planning nor the implementation stage has obtained adequate level of collaboration<sup>75</sup>. <sup>76</sup>The need for coordination comes only at times of savior problems of environment.

With regard to sources of industrial pollution,<sup>77</sup> all kinds of industrial pollution are found in Burayou city. There are different aspects of pollution in which its intensity vary from factory to factory. Water pollution, soil pollution, sound pollution and air pollution are found in the city.

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<sup>72</sup> Ibid.

<sup>73</sup>Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018, Fikadu Geremew,Legal expert of city's environmental authority21/02/2018, Desalegn Tafa-Head of the environmental authority of the Burayou city, 08/03/2018,Guta Hambisa-from office of city council on FGD held at city level, 28/02/2018,

<sup>74</sup>Gebeyo Debisa-from office of health on FGD held at city level, 28/02/2018,

<sup>75</sup>Desalegn Tafa-Head of the environmental authority of the Burayou city, 08/03/2018,Fikadu Geremew,Legal expert of city's environmental authority21/02/2018,

<sup>76</sup>Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018

<sup>77</sup>Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018Desalegn Tafa-Head of the environmental authority of the Burayou city, 08/03/2018,

Some of the factories release chemicals such as caustic soda to nearby water body without having any treatment plant. In this regard biotic organisms and other animals are highly affected by the chemicals which are released from the factories. Textile industries are also highly pollutant and release chemicals to the river which highly affected animals living around the factory. Flour factories are also releasing steam to the environment which causes air pollution. The bad Odor of cosmetics industries is also causing air pollution in the city.  $\text{CO}_2$  is also released from smoke of house holders and industries in the city. Water pollution is also a serious problem of the Burayu city. As there is no any sewerage system in the city, industries highly discharge wastes into rivers of the city. As a result, all the rivers of the city are affected by pollution.

<sup>78</sup> Some food processing factories such as abattoirs are also the source of extremely bad odor/smell. Both the municipal and the private abattoirs are located in the resident areas causing serious damage on human health. They have a serious of quality problems and highly polluting the air as it release bad smell into the environment. In addition, both of these abattoirs realize liquid wastes into the river without any significant treatment. To solve the existing problem the environmental authority gave warning many times for improvement but the problem continued till know without significant improvement. The municipality's abattoir is the most worst, in which different time could not bring improvement. The reason why the authority did not close it is because of the attitude it is the government institution, this hindered the authorities action. The abattoirs do not use appropriate technology to reduce its impact on environment until know it relied on traditional approach which highly impacted the environment. Even if the Municipality gains more than 200, 000 birr/month from the rent and tax from its abattoir, the environmental improvement is not seen. No progress is made to tackle the environmental impacts of the abattoir in Burayou.

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<sup>78</sup>Miss Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018, Mr. Desalegn Tafa-Head of the environmental authority of the Burayou city, 08/03/2018,Mr. Guta Hambisa-from office of city council on FGD held at city level, 28/02/2018, Mr. Aschalew Biru- from office of workers and social affairs on FGD held at city level, 28/02/2018,

Figure 4.1: Municipality's abattoir environmental future



Source: Researcher own snap shoot during field Survey; 2018

As it is seen from the above picture, the fence of abattoir is filled with wastes causing bad odor which is impacting health of the people living around the area. People around this area unable to breath clean air.

**Figure 4.2: Municipality's abattoir while releasing waste to the environment and the river**



Source: Researcher own snap shoot during field survey; 2018

Figure 4:2 shows that the discharge of liquid waste from the municipality's abattoir to the nearby water body. Rather than using treatment plant, the whale is used to hold blood which is

discharged into the river. The whale was filled and there was discharge of blood into the water body without treatment.

Figure 4.3: Municipality's abattoir treatment plant



Source: Researcher own snap shoot during field survey; 2018

The above picture shows that the municipality's abattoir treatment plant which was started by municipality in 2012 but it is not finished until this period and stopped for a long time.

With regard to impacts of industrial pollution on human, animals and biotic life the result of public questionnaire shows that it <sup>79</sup>created a problem on human and animal health in the city. It created transferable disease such as water born disease, it pollutes the air and the public living around this area are affected by respiratory disease such as asthma, common cold, lung disease, heart case problem, pneumonia, allergic, skin disease, seines, Bronchitis. It is difficult to get clean air around the industrial area. Moreover, ground water and surface water are polluted by the factories. <sup>80</sup>In 2016, more than 10 cattle died as a result of chemicals released into the water body in Gefersa Nono Kebele in Sengota Gox and Seriti Gox in Gefersa Guje. According to informants from the public in Sengota area, as the rivers are highly polluted know the farmer around the industrial area could not wash their cloth with the rivers water. Since the rivers are highly polluted, it also became non drinkable for the cattle.

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<sup>79</sup> 148(91.4%) of respondents responded that the industrial pollution is causing impact on human and animals.

<sup>80</sup>Interview with Miss Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018 and Aschelew Biru- From office of social workers

#### 4.2. The Causes and Challenges of Solid Waste Disposal in the City of Burayou

One of the serious public environmental questions in the city of Burayou is the solid waste disposal site. This is a very key question in relation to good governance. There is no formal landfill for solid waste disposal. The municipality has been dumping solid waste of the city nearer to the residence area without considering its impact on the people living around this area. The city administration did not give attention to build appropriate landfills considering serious public concern on this issue. Even when the environmental authority raises the problem, the city administration specially the municipality do not give appropriate attention to solve the existing problem. As a result, peoples which are living near this area are highly affected by this inappropriate landfill<sup>81</sup>.

There is weak management of solid wastes; there is no appropriate system to recycle and reuse the solid wastes for other purpose, the system of waste disposal in the city is very traditional and mainly relied on dumping the solid waste into unsafe landfills. Open dump site of the city is also one source of air pollution as the solid waste is burned without any selection of the waste. As a result, plastics, bones from abattoirs and other wastes when it is burned it causes high air pollution and resulted in bad odor which impacted the health of the people living near this area<sup>82</sup>.

When the waste is burned in this landfill the air of this area is polluted and it is filled by bad smell. During the night time it became difficult to get sleep because of the bad smell which comes from the wastes burned in the landfills. The smell from land fill has highly affected the children; as the children visit health clinics 2-3 times in a month. The communities including children are affected by asthma, scenes, influenza, common cold and other diseases<sup>83</sup>. Some informants note that “we are eating with fly”.

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<sup>81</sup> Mr. Fikadu Geremew, Legal expert of city’s environmental authority 21/02/2018, Miss Yeron Tekalegn-EIA expert of the city’s environmental authority, 23/02/2018,

<sup>82</sup> Mr. Desalegn Tafa-Head of the environmental authority of the Burayou city, 08/03/2018, Miss Yobdar Geneti-from municipal office on FGD held on 28/02/2018, Mr. Aschalew Biru- from office of workers and social affairs on FGD held at city level, 28/02/2018

<sup>83</sup> Gebeyo Debisa-from office of health on FGD held at city level, 28/02/2018, Mr. Aschalew Biru- from office of workers and social affairs on FGD held at city level, 28/02/2018

4. Figure 4.4: While bone was collected at Burayu abattoir (PLC)



Source: From researcher own snap shot during field survey; 2018

As it is seen from the above picture, the bone is collected in garbage cans to be transported into improper waste dump site in Leku Keta. The collected bone has been burnt in the land fill causing air pollution which impacted communities of the area.

Beyond its impact on human communities' health, the waste disposal site has disturbed the religious practices of Saint Michael, the Orthodox Christian church at Leku Keta Kebele.

**Figure 4.5: Saint Michael Church located in Leku Keta Kebele**



Source: From researcher own snap shot during field survey; 2018

As it is illustrated in figure 4:5, the landfill area including Saint Michael church in Leku Keta is filled with smoke from landfill while it was burning which has created savior health problem on residents of the area and disturbing religious practice in the church.

This land fill in the future may also cause a serious damage to the people living at the buffer zone, the buffer zone which is highly filled by illegal settlement may be affected by slide of this solid waste dumps as it had happened in Kolfe Keranio sub city of Addis Ababa last year. This improper land fill is located where it is vulnerable to erosion. During the rainy time the waste from this improper landfill is contaminating the river which is found near to this landfill<sup>84</sup>.

The construction of the land fill needs high capital, high technical capacity and vast area which should be reserved for it. The area which was allocated for construction has been covered by illegal settlements and the city administration is unable to protect the area from illegal settlements. Similarly, the system of waste management in the city is very poor and awareness in the issue is also very poor. There is no practice to identify the decomposed and not decomposed waste before it is dumped into open landfill and there is no reclining activities to decrease burdens on land fill; there is no integrated solid waste management system in the city and the municipality is not active in this regard<sup>85</sup>.

Because of the lack of appropriate landfill in the city, different problems observed in the city. The city is highly polluted and not conducive for its residents to live in it, garbage cans are not lifted on time, solid wastes is seen scattered in different parts of the city and the rivers are highly polluted by wastes from industries and houses of residents. This hindered the use of river water for different purposes and cattle are affected by the released pollution. There is also a time when the cattle eat plastic and face diseases which force it up to death<sup>86</sup>.

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<sup>84</sup>Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018,

<sup>85</sup> Mr. Bayisa Ketema- Head of the office of Mayor of Burayou city, 26/02/2018

<sup>86</sup>Mr. Bayisa Ketema- Head of the office of Mayor of Burayou city, 26/02/2018,Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

Figure 4.6: Waste Disposal Sites in Burayou city



Source: researcher own snapshot during field survey; 2018

The above figures show that problems resulted from the absence of planned land fill in the city of Burayou. The solid waste garbage cans are not lifted on time and solid wastes are dumped everywhere in different areas of the city.

The city administration decided to build landfills to solve existing problem in this regard. However, in practice there is a very weak performance from the city administration side to respond to public concern. Every year the plan is approved by the city council without any implementation. The attention given by the city administration to solve the existing problem is very low. This is resulted from lack of awareness on environmental issues and lack of proper attention from leaders of the city administration as their main concern is economic issue rather than environmental issue that is why every year is passed by planning without implementation<sup>87</sup>. In this regard the head of the mayor office Mr. Bayisa also argues that the problem is not solved because of the lack of budget, adequate technical expertise, and lack of commitment to solve the existing problem from the city administration in giving it priority.

With regard to solid management system, the city did take experiences of many cities such as Hawasa, Adama and Shashamene. However, there is no any improvement in the management of the solid waste in the city<sup>88</sup>.<sup>89</sup> There is also a problem of logistics and budget for the management of solid wastes in Burayou city. The body which runs the solid waste management is one part of the municipality operating under municipal control having less attention given to it. Let alone the city administration even the municipality officials do not give appropriate attention for issues of solid waste management of the city. The activity of solid waste management of the city is overshadowed by other municipality's activity at the city level.<sup>90</sup> There is also a problem of awareness on the side of public on the solid waste management this is resulted in throwing the waste everywhere.

In general, the solid management institutions in Ethiopia not only lack financial capacity but also lack capacity to work in collaboration with local communities; and much need to performed for improvement of solid waste management institutions(Tadesse, 2010:67). This is similar in case of Burayou city where the problem is pervasive.

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<sup>87</sup> Mr. Fikadu Geremew, Legal expert of city's environmental authority 21/02/2018, Miss Yeron Tekalegn-EIA expert of the city's environmental authority, 23/02/2018, Mr. Guta Hambisa-from office of city council on FGD held at city level 28/02/2018, Miss Yobdar Geneti-from municipal office on FGD held on 28/02/2018

<sup>88</sup> Gebeyo Debisa-from office of health on FGD held at city level, 28/02/2018

<sup>89</sup> Mr. Fikadu Geremew, Legal expert of city's environmental authority 21/02/2018,

<sup>90</sup> Mr. Guta Hambisa-from office of city council on FGD held at city level, 28/02/2018, Mr. Tariku Birasa-from office of investment on FGD held at city level, 28/02/2018

Figure 4.7: Waste Disposal sites and vulnerability of the cattle



Source: From researcher own snap shot during field survey; 2018

As it is observed from the above picture, the cattle were eating solid waste and grazing contaminated grass by industrial waste.

### **4.3. Environmental Supervision: Regulation, Monitoring and Evaluation in the City of Burayou**

#### **4.3.1. The City's Environmental Structure and Institutional Capacity**

The structure of the environmental authority at the city level needs 21 human powers. From this 17 are professionals. But the existing structure is not filled with necessary human power. From 17 professionals, there are only 6 experts with only 3 having related professions in environmental protection<sup>91</sup>.<sup>92</sup>Structurally, there should be experts who analyze the impacts on soil and air; and there should be laboratory and laboratory experts“ as well. The authority gives decision by its own judgment without any scientific study of impacts, simply by seeing it by necked eye. Therefore, there is a serious gap between the environmental structure of the city and existing human power in the environmental authority. Both the problem of quality and quantity in terms of environmental professionals exists at the city level. In addition, the environmental authority does not have structure at Kebele Level.

In terms of financial capacity, there is inadequate budget at the city level to perform environmental programs. The authority lacks budget to solve lack of environmental professionals. The budget which has been allocated for environmental authority is very low. From ULGDs project budget 5% of the budget is reserved to the issues of environmental protection. However, the budget is vested in other activities without any consideration of environmental activities of the city. The authority has also a serious logistics problem to implement environmental programs in the city<sup>93</sup>. The environmental authority does not give appropriate attention by the city administration to be strong institution which effectively performs its environmental programs at the city level. In addition to failure to provide appropriate budget to fill gaps of professionals, the city administration does not give attention to provide vice head of the authority which has been allowed by the structure before a year<sup>94</sup>.

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<sup>91</sup>Miss Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018,Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

<sup>92</sup>Miss Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018

<sup>93</sup>Miss Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018

<sup>94</sup>Mr. Bayisa Ketema- Head of the office of Mayor of Burayou city, 26/02/2018,Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

The supervision which is made by the authority does not much with the growing concern on environment. Supervision needs professional and adequate human power, however, the environmental authority has no adequate professional to perform effective supervision. The capacity of the authority does not much with the growing number of factories at the city level<sup>95</sup>. There are a growing number of factories in the city which tried to escape from the environmental control of Addis Ababa and trying to work hiding themselves from the authority's control. This makes difficult to effectively supervise and bring intended environmental output at the city level by addressing all the problematic factories<sup>96</sup>.

#### **4.3.2. The Role of City Council in Environmental Protection**

In principle, the city council has significant role to control executives including environmental sector of the city to enhance the activities performed at both the sector and city levels. However, the result of the interview with Mr. Kebeto Albe shows that the practice of the city council in making check and balance on environmental activity of the city is nonexistence. There is no any directive which has been enacted by the city council to support the implementation of environmental programs at the city level. The council did not see the challenge and problems of environmental issue and there is no any trial to solve the environmental problem from the side of the city council. The council did not give significant attention for environmental protection issues of the city and did not sense that the environmental agenda and the principle which is stated in the constitution every person shall live in clean environment<sup>97</sup>.

In addition, since the establishment of the environmental authority at the city level, the city council did not hear a single environmental performance report of the authority. The council did not see the authority as significant sector. Rather the focus of the council is economic and other social sectors. Furthermore, there is no any scenario where the standing committee of the council supervises the performance of the city's environmental authority. There was no anytime where the committee supervises the environmental performance of the city's environmental authority. The council did not have special agenda for issues of environmental protection and there was no

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<sup>95</sup> Mr. Fikadu Geremew, Legal expert of city's environmental authority 21/02/2018, Mr. Bayisa Ketema- Head of the office of Mayor of Burayou city, 26/02/2018, Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

<sup>96</sup> Ibid

<sup>97</sup> interview with Mr. Kabeto Albe- house speaker of city council Burayou 27/02/2018

time which was reserved for discussion on the issues of environmental protection of the city. Likewise, there was no any concern to identify environmental problems related to industrial pollution in the city by the city council. The council was not in a position to supervise and support environmental performance of the authority since environmental issues were not the priorities of the council<sup>98</sup>.

### **4.3.3. Could the City Supervise Environment? Some Empirical Observations**

The environmental authority at the city level is responsible for supervising all factories, hotels and government projects at the city level and take corrective actions on the pollutant firms<sup>99</sup>. The authority has full responsibility up to closing firms which cause pollution on environment. However, there are no clear and identified responsibilities given to urban environmental authority by law, rather what are given responsibilities to the regional environmental authority is given to the local government environmental authorities in common sense<sup>100</sup>.

The researcher did not get clearly identified mandates of the city's environmental authority rather the regional state environmental authority has sent all its mandates which is given to it by proclamation no. 199/2016 to the city's environmental authority. All the regional states environmental protection mandates are passed to the city's environmental authority even without identifying what environmental matters is done at urban local government levels (see Appendix). In this regard, Mr. Shumi, former EIA Director and now Director of climate change, argued that there is no clear division of environmental responsibilities between regional state environmental protection authority and urban local government environmental authority. The director argues that if the responsibility is allocated to each level of government there is a fear that the level of governments run for implementation of its responsibility which may create gap in coordination, that is why the responsibility is not identified for local government rather all responsibility of the regional state environmental authority are passed to urban local governments environmental authority.

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<sup>98</sup> Ibid.

<sup>99</sup> Interview with Miss Yeron Tekalegn-EIA expert of the city's environmental authority, 23/02/2018

<sup>100</sup> Interview with Mr. Fikadu Geremew, Legal expert of city's environmental authority 21/02/2018 and Mr. Desalegn Tafa-Head of the environmental authority of the Burayou city, 08/03/2018

However, the argument of the Director does not hold water because this kind of unclear mandate creates gaps in accountability in the implementation of environmental programs. Besides, it creates gaps in autonomy of local governments. In this regard, there is consideration of local environmental authority as a branch of regional environmental authority rather than autonomous local environmental authority. The provision of proclamation 147/ 2009 also drives to the conclusion that the local government environmental authority is simply a branch of regional state because in this proclamation, it is stated that the Bureau shall have branch offices at Zonal, Woreda and urban local government levels.

The regulatory mechanisms which are used by the authority are; giving professional support, for institution based on the existing problems at the ground. If the support do not taken by the institutions and if the pollution continues the authority has a mandate to give warning and if not improved it has a responsibility to close the pollutant firms. The authority has also a mandate to approve partial EIE (for factories which have less pollution on environment) while full EIA (for projects which have high intense of pollution) is given at the regional state and federal levels. The authority at the city level has a responsibility to supervise and to take necessary measures on all of the factories which are licensed at the city, regional state and federal level. It has also a responsibility to awareness creation on issues of environment at the city level; and has a power up to closing pollutant factories<sup>101</sup>.

In this respect, to what extent the city's environmental authority is successful in controlling the factories which are licensed by regional state environmental authority and federal ministry is questionable. According to Miss Yeron, even if the mandate of supervision and taking measure of on all factories is given to the city's environmental authority, greater projects such as Muger cement and transformer factories which are under federal control became difficult for supervision of the authority. Since these projects are managed by higher officials at the federal level they do not have the will to be supervised and to improve environmental performance and experts of environmental authority lacks confidence to take measures on such factories.

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<sup>101</sup>Interview with Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

<sup>102</sup>Environmental supervision at the factory level on the city mainly is carried out by the city's environmental authority. There is also periodic supervision from the side of the regional state environmental authority and rare supervision from federal side on factories operating in the city. The program of the authority to make supervision at the factory level is 3 days in a week. The purpose of supervision is to identify the existing environmental problem at factory level, to know environmental performance of factories, to take profile of factories, to give institutional support to enhance environmental performance at the factory level and to take appropriate measure if the support is not changed into practice. In this regard, some industries used the feedback of supervision and improved their environmental performance. <sup>103</sup>The supervision and field visit also helped the authority to get industries which perform its work by expansion without getting permission from the city's environmental authority. For example, in fence of Afia food complex factory, six factories were identified by the authority's supervision team. Similarly, in one of the fences of Cosmetics factory five factories are seen working by only renting the production area. In addition, in the fence of government owned, Oromia trade center of crop, the marble factory was also seen by the authority after four years of its engagement in production. There were also other industries which were seen by supervision time performing its activity with license of Addis Ababa.

Similarly, according to results of the study, the majority of the respondents argued that the city can make environmental supervision at the city level. The respondents argue that if the capacity of the environmental sector is enhanced and if there is strong commitment on environmental protection it can supervise environment at the city level.

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<sup>102</sup> Ibid

<sup>103</sup> Interview with Miss Yeron Tekalegn-EIA expert of the city's environmental authority, 23/02/2018

Table 4.1: Can city's environmental sector control environmental problem or not?

Response	Frequency	Percent
Yes	91	56.2
No	47	29.0
I don't know	24	14.8
Total	162	100.0

Source Field Survey; 2018

As it is presented in the above table 91(56.2%) of respondents agreed that the environmental problem of the city can be resolved by the city's environmental authority, 47(29%) of them responded that the authority can't deliver the intended outcome and 24(14.8%) responded that they don't know whether it can bring the intended outcome or not.

The other who argues the city's environmental authority can't solve environmental problem justified their reason. Some of these reasons raised by the respondents were: the authority lacks commitment to create environmental awareness, there is weak coordination among environmental stakeholders, and the authority lacks adequate and relevant professionals. The environmental performance of the city is very weak, lack of adequate supervision on factories by the authorities, weakness to enforce the existing laws, and since most of the environmental licenses are given at federal and regional state levels it is above capacity of the city's environmental authority to make supervision on these factories.

Furthermore, there is lack of coordination among environmental sectors at the city level. While giving licenses environmental sectors do not inform each other to prevent the future environmental problems. For instance, there are water processing and child food factory near muggar cement factory which shall not be given license in the same area. There is weak coordination between city's environmental authority and office of trade; without getting environmental clearance from the city's environmental authority, the office of trade gives trade license; this creates a problem in the environmental protection at the city level. For instance, to renew annual environmental license from more than 500 factories only 50-100 factories came to the authorities office to get renewed license. However, most of the factories including those

which are highly pollutant did not come to the authority rather they simply get renewal from trade office without considering the issues of environment<sup>104</sup>.

The other factor which contributed for ineffectiveness of environmental supervision at the city level is resulted from lack of political commitment from the city administration on environmental issues. The city administration does not give practical attention for environmental protection at the city level. There is no adequate professional human power at the city level and there is no logistics support from the city administration for the authority; even the authority has no car to carry out supervision at the factory level, this makes tiresome to make appropriate supervision at the factory level. As a result, supervision which has been carried out at the factory level is inadequate to solve the existing problem of industrial pollution in the city. The political leaders at the city level see only the revenue and job opportunity from factory ignoring the impacts of industries on residents of the city that is why the attention given to the authority is very low<sup>105</sup>. In this regard, many of the respondents also approve that the environmental performance of the city environmental authority is very weak.

**Table 4.2: Performance of city’s environmental authority**

Response	Frequency	Percent
to a very great extent	2	1.2
to a great extent	11	6.8
Undecided	18	11.1
to a lesser extent	64	39.5
to a very lesser extent	67	41.4
Total	162	100.0

Source: Filed Survey; 2018

The table shows that 2(1.2%) of respondents responded the city’s environmental authority performed to a very great extent and 11(6.8%) responded that the performance is to a great extent and 18(11.1%) of them did not decided where as the majority 131(81%) of them responded that the environmental performance of the city’s environmental authority is weak.

<sup>104</sup>Ibid

<sup>105</sup> Ibid, Interview with Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

There are no significant materials to measure the level of pollution of factories at the city level. The activities of the environmental authority are not supported by scientific laboratory. The only material which is used at the city level is only litmus paper which helps only to see the situation by its color rather than knowing the problem in detail. This makes difficult to present the case before the court when the pollution causes damage on human and animals' health<sup>106</sup>.

The city's environmental authority also faces challenges to fully put the environmental laws into practice. At the city level there are only environmental proclamations at the hands of the authority. However, there are no adequate regulation and directives at the hands of the city's environmental authority to effectively change environmental laws into practice. The proclamation is too general and the regional and federal government failed to provide appropriate directives and regulations in this regard<sup>107</sup>.

<sup>108</sup>The other problem of environmental issue in the city is related with capacity of city's environmental authority. The authority does not have full capacity to solve complex environmental problems existing in the city. There is a serious problem of human power and logistics that the environmental authority of Burayou city is facing.

**Table 4.3: The capacity of the Authority in regulating industrial pollution**

Response	Frequency	Percent
very strong	5	3.1
Strong	16	9.9
Undecided	33	20.4
Weak	62	38.3
very weak	46	28.4
Total	162	100.0

Source: Field Survey; 2018

<sup>106</sup>Interview with Miss Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018

<sup>107</sup>Interview with Mr. Fikadu Geremew,Legal expert of city's environmental authority21/02/2018 and Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

<sup>108</sup>Interview with Mr. Fikadu Geremew,Legal expert of city's environmental authority21/02/2018, Interview with Miss Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018 and Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

As it is seen from the above table 5(3.1%) of the respondents argue that the city's capacity is very strong to protect the environment, 16(9.9%) argued as it is strong, 33(20.4%) undecided (do not know) and 88(67.7%) of the respondents argued that the city's environmental authority lacks capacity to perform environmental activities at the city level.

#### **4.4. The State of EIA in the Burayou City Administration**

##### **4.4.1. What Roles and Responsibilities at the City Level?**

Until the recent time, the city's environmental authority had no mandate to review and approve EIA. Currently, it has given a mandate to review and approve partial EIA. Full EIAs are reviewed and approved by the regional and federal environmental sectors. For existing factories in the city 46.11%, 26.42% and 27.46% of EIAs are approved by federal, regional state and the city respectively. The problem in this regard is the lack of adequate consultation of the city's environmental authority while approving EIA and giving permission at federal and regional state level<sup>109</sup>.

The processes of its preparation lack quality and discipline that EIA process need to have. Most of the studied EIA are not taking into account the specific circumstance in which the project will be implemented. The consultants make copy and paste rather than studying actual impacts of the project. For instance, there was a time when consultants make copy and paste for projects of flour from EIA of plastic projects. Most of the time, the proponents change only the title of the project rather than studying the circumstances at the ground. When its structure is seen, the projects have specific titles/ headings; however their bodies do not show the situation of the specific project. From the experience of the authority, there were project owners who take advice on the issues of EIA in the morning and present the document in the same day after noon. There were also situations when the EIA in its body mentioned other cities such as Dukem and Sululta, this shows that the proponents take it only by paste and copy without seeing it<sup>110</sup>.

The owners of the projects prefer consultants who offer minimum cost by compromising the quality of EIA, this makes most of the EIAs similar having serious quality problem. The EIA study are prepared by guess, downloaded from internet without considering water, air,

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<sup>109</sup> Interview with Miss Yeron Tekalegn-EIA expert of the city's environmental authority,23/02/2018

<sup>110</sup> Ibid

microorganisms, areas of the project and the released wastes of the project. EIAs are only considered as the source of business by consultants that is why they prepare it without considering the particular area in which the project is built. In other hand, publics should be adequately consulted in the impacts of the projects before it come into implementation phase. However, the participation of publics and affected communities are very weak<sup>111</sup>.

If the study of EIA is not much with the established principles and standards, the authority make comment and returned back for improvements. If the comment does not show any progress on the next time, the authority can reject it from approval. However, the authority approves the EIA even if the study of EIAs looks similar by considering this is country wide problem. At the city level there is only a single person who is working on reviewing EIA, as a result rather than seeing detail contents some times by shallow looking a single expert approve the project. Consequently, sometimes when the required expert does not present, others which are not qualified in this field approve EIA without seeing it in detail<sup>112</sup>.

According to June 2017 inventory of the city environmental authority, 17.6% of factories have EIA document, 30.5% have environmental management plan and 45.59% have no both EIA and Management plan, 6.76 factories condition is not known. From the inventory it was seen that if the site of the project and expansion is carried out by factories and there is a weak condition in reporting the situation to the environmental authority. Most of the factories change and expand their project without permission of the environmental authority. The problem is seen when the authority makes supervision which needs long time to reach every factory since there is no logistics for this purpose. There is no adequate data which show the factories performance in implementation of EIA at the factory level rather there are fragmented data at the city's environmental authority level. In addition, there are no organized lists of pollutant industries at the city level. The performance of the environmental authority at the city level is based on complain of the public rather than having detail information of those pollutant factories<sup>113</sup>.

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<sup>111</sup>Ibid and Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

<sup>112</sup> Interview with Miss Yeron Tekalegn- EIA expert of the city's environmental authority, 23/02/2018

<sup>113</sup> Ibid and Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

The reporting trend of factories at the city level is also very weak. Most of the factories do not report on its performance of EIA and management plan to the city's environmental authority. Out of the existing factories at the city level there are only 9 factories which are reporting to the city's environmental authority. The factories do not have environmentalist which help the performance of environmental activities at the factory level and the owners and managers of the factories do not have known how about environmental issues and reporting as many factories do not perform internal audit. The factories also do not allocate adequate budget for performing environmental activities at the factory level<sup>114</sup>.

If the factories are not in a position to report to the city's environmental authority, the authority try to address the problem by giving advice to the factory to employ professionals who facilitate environmental activities at the factory level. Until this time there is no factory which is punished because of failure of reporting to the city's environmental authority. This problem is resulted from the existing law which is too general and does not include specified provision to make appropriate measure in this regard<sup>115</sup>. The punishment by not reporting environmental audit is not stated in detail in the proclamation and there are no directives which help to take appropriate measures on factories and there is no any case which is presented to the court. The need of the government is expanding investment to enhance economic development of the country this shadowed the issues of environmental protection<sup>116</sup>.

The accountability issue in the issue of EIA is bounded to the proponents rather than including accountability of officials and experts of environmental authority. Therefore, there is no legal accountability of officials and experts while wrongly approve unqualified EIA rather they try to manage the problem to correct it in other circumstance. Generally, until this time no one is legally punished by approving unqualified EIA from the government side in the city<sup>117</sup>.

In sum, both the preparation and implementation process of EIA at the city level has huge gap. In its process of preparation the EIA lacks quality as its preparation is seen by owners of the factory to fill the required criteria for getting permission. There is no commitment at the factory level to

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<sup>114</sup> Ibid

<sup>115</sup> Interview with Miss Yeron Tekalegn- EIA expert of the city's environmental authority, 23/02/2018

<sup>116</sup> Interview with Mr. Fikadu Geremew, Legal expert of city's environmental authority 21/02/2018

<sup>117</sup> Interview with Mr. Fikadu Geremew, Legal expert of city's environmental authority 21/02/2018, Miss Yeron Tekalegn- EIA expert of the city's environmental authority, 23/02/2018 and Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

put it into practice; even most of the factories do not know where the document is after its approval without any trial for implementation<sup>118</sup>.

#### 4.4.2. Public Participation in the EIA and Environmental Decision Making in the City of Burayou

There is rare public participation in the process of the study of EIA in the city. Most of the times the consultants, without addressing the concerned public and victims they simply wrote the name of people which were not a part of the study and present it to the authority. There is an experience in which the consultants decided to consult the public in the morning and there is an event in which they report the list of the public in the same day after noon<sup>119</sup>.

**Table 4.4: Local communities’ participation in the environmental decision making**

Response	Frequency	Percent
Yes	32	19.8
No	81	50.0
I do not know	45	27.8
Other	4	2.5
Total	162	100.0

Source: Survey; 2018

As it is seen from the table it is 32(19.8) who responded that there is public participation in environmental decision making in the city and 45(27.8%) do not have information to respond it, the majority 81(50%) the respondents argued that there is no public environmental decision making in the city.

Let alone the public, consultants who are registered in the same association for preparation of EIA are not fully engaged in the process of EIA preparation. For example, there are a scenario in

<sup>118</sup>Interview with Miss Yeron Tekalegn- EIA expert of the city’s environmental authority, 23/02/2018 and Mr. Desalegn Tafa- Head of the environmental authority of the Burayou city, 08/03/2018

<sup>119</sup>Interview with Miss Yeron Tekalegn- EIA expert of the city’s environmental authority, 23/02/2018

which 9 peoples are established an association to prepare EIA, these persons are come together from different disciplines such as environmentalist, economist, health, sociology, lawyer, geographer, engineer and etc. In principle, these peoples can achieve the given criteria and get the license as a consultant. However, in practice only a single person did perform the EIA study without the participation of the other 8 remaining persons. The remaining also follows similar actions by themselves without involvement of others. This creates quality gap in preparation of EIA<sup>120</sup>.

There is no appropriate system which is designed to enhance public environmental decision making at the city level. Publics raise the issues of environmental protection on other meetings prepared by the city administration. There are no adequate environmental forums for public consultation on environmental issues of the city. In addition there is no clear and detail procedure for public participation in environmental decision making<sup>121</sup>.

**Table 4.5: Public forums on the environmental issues of the city of Burayou**

Response	Frequency	Percent
once a year	26	16.0
two times a year	11	6.8
three times a year	2	1.2
four times a year	3	1.9
not at all	120	74.1
Total	162	100.0

Source: Survey; 2018

As it is seen from the above table 26(16%), 11(6.8%), 2(1.2%) and 3(1.9 %) of the respondents responded that the public forum held once a year, two times a year, three times a year and four times a year respectively. Whereas 120(74.1%) of the respondents responded that that there are no established public forums at all on issues of environment this shows how much the public's are not given adequate attention to have discussion on issues of environment in the city.

<sup>120</sup> Ibid

<sup>121</sup> Interview with Mr. Fikadu Geremew, Legal expert of city's environmental authority 21/02/2018 and Ibid

Because of public environmental forums in the city there is lack of public awareness in the environmental issue. The result of public questionnaire in this regard, also shows the absence of adequate environmental awareness of publics in the city.

**Table 4.6: Public Awareness on Environmental and Industrial Pollution of the City of Burayou**

Response	Frequency	Percent
very high	19	11.7
High	35	21.6
Undecided	10	6.2
Low	71	43.8
very low	27	16.7
Total	162	100.0

Source: Field Survey; 2018

As it is illustrated in the table, 71(43.8 %) and 27(16.7%) of the respondents responded that the public's awareness is low and very low respectively, this shows that 98(60.5%) the respondents argued that the public awareness on the environmental issues of the city is weak.

Similarly, in the process of EIA study and reviewing process in the city, the public participation is also weak. Public are not given appropriate actions to participate in decision making process and their needs are not taken into account in the preparation and implementation phase of EIA<sup>122</sup>.

**Table 4.7: Public participation in the environmental impact assessments in city of Burayou**

Response	Frequency	Percent
very active	23	14.2
Active	16	9.9
Undecided	27	16.7
Weak	49	30.2
very weak	47	29.0
Total	162	100.0

Source: Field Survey; 2018

<sup>122</sup>Interview with Mr. Fikadu Geremew, Legal expert of city's environmental authority 21/02/2018 and Miss Yeron Tekalegn-EIA expert of the city's environmental authority, 23/02/2018

As it is observed from table 4:7, 23(14.2%) of the respondents argue that the public participation in EIA is very active, 16(9.4%) responded that is active and 27(16.7%) undecided or do not have known how in the issue and 96(59.2%) are responded that the process lacks adequate public participation.

Remarkably, there are different factors which hindered effective public participation and the environmental decision making at the city level. These include: 1) False reports of the public participation on EIA as the consultant report un-consulted publics as part of discussion, 2) The time given by the proclamation on public consultation is not enough as it gives only 15 days“ time framework for public discussion 3) Lacks of appropriate procedures is also one of the challenge for public participation. Public participation in environmental decision making also lacks focus from the environmental authority and the city administration<sup>123</sup>.

#### **4.4.3. The Role of Factories in Environmental Protection and Implementation of EIA**

The factories have a responsibility to implement the studied EIA and environmental management plan to improve environmental quality of the city. Factories are the final destination where EIA and environmental laws are changed into practice. However, according to interview and observation of researcher at six factory level; Kebron food Complex, Tewekelti flour factory, Afia food complex, Burayou abattoir (PLC), Municipalities abattoir and Selam Cosmetics factory there is extremely weak environmental performance at factory level.<sup>124</sup>At the factory level during his interview the researcher could not get either EIA or environmental management plan. All the factories could not provide EIA and most the factories managers did not have known how on the concept of EIA and environmental management plan. During the interview time these informants replied that what do you mean by EIA and environmental management plan? So since the document is not exist at the factory level it was difficult to judge whether its content is valid or not.

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<sup>123</sup>Interview with Miss Yeron Tekalegn- EIA expert of the city’s environmental authority, 23/02/2018

<sup>124</sup>Interview with Meskerem Getachew- Quality control Manager of Keberon food complex 22/02/2018, Mohamad Siraj – General Manager of Altewokelti food complex 23/02/2018, Alsar Juwar Financial manager of Afia food complex 23/02/2018, Hiwot Ingida – Manager of selam cosmetics 23/02/2018 and Teka Dibaba – Member of executive committee of Burayou abattoir PLC 01/03/2018

What is surprising in this regard as the researcher find data from the city's environmental authority the municipality's abattoir which is the government owned firm does not have both EIA and environmental management plan. In addition, at all factory levels in which the researcher had an interview <sup>125</sup>there were no appropriate environmental experts to facilitate the implementation of EIA and environmental management plan at the factory level.

All the factories which are observed by the researcher did not present the performance report to the environmental authority. Most of them had no understanding of reporting environmental activity to the authority and had no awareness on the environmental proclamations in general and EIA proclamation in particular. In addition it was only one factory that is Selam cosmetics factory which responded that they had made internal environmental audit. However, it was unable to respond to the researcher about the strength and weakness of factories in implementation of EIA.

#### 4.4.4. Who is responsible for the Environmental Problems in the City of Burayou?

The issue of appropriate responsible body to protect the environment is becoming debatable in different perspectives. At the city level there is also diverse arguments on the issue of appropriate level of governments responsible for environmental governance. The response of public also shows these diverse arguments.

**Table 4.8: Level of Governments Responsible for Environmental Protection**

Response	Frequency	Percent
City of Burayou	26	16.0
Regional state of Oromia	25	15.4
Federal government	7	4.3
City and the Region	26	16.0
Region and federal	2	1.2
City, Region, Federal	72	44.4
Other	4	2.5
Total	162	100.0

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<sup>125</sup> Ibid

As it observed from table 4:8, respondents argued in different directions. 26(16%) of the respondents argued for city of Burayou, 25(15.4%) for regional state of Oromia, 7(4.3%) for federal government, 26(16%) for city and the region, 2(1.2%) for region and federal, 72(44.4%) for city, region and federal, 4(2.5%) also argued for other structures such as Kebele, city and region and Kebele and city.

The existing gaps in protection of environment from industrial pollution raise the question of responsibility at each level of governments. In this line, the factory level to the federal level all bodies which are related with environmental protection are responsible for problem of environmental pollution in the city. The factories are responsible for failure to implementing EIA and management plan at the factory level. At the city level the environmental authority, the stake holders sectors, and the city administration are also responsible for the failure to prevent industrial pollution in the city. The city administration is the responsible level of government which is nearer to the community and knows the environmental problem which affects the resident of the city. So it has a mandate to check the existing problem and to take appropriate measure. However, in practice the city administration did not give appropriate attention for issues of environmental protection. In this regard, the city administration is accountable for the failure of environmental protection in the city<sup>126</sup>.

The federal government is also responsible for failure of environmental protection at the city level. It should provide environmental regulation and directives on time and should provide capacity building programs for regional environmental authority to enhance environmental performance. The federal government is also responsible for projects which are under its direct supervision. As some projects' EIA's are approved at the federal level the federal government should supervise this projects operating in the city. The federal government has a responsibility to provide scientific research to other levels of governments and provide world experience of environmental protection. In practice, the federal government could not adequately provide the above issues for effective implementation of environmental programs at the city level<sup>127</sup>.

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<sup>126</sup>Fikadu Geremew- From environmental authority, Gebeyo Debisa- from health office, Yobdar Geneti- From office of Municipality, Guta Hambisa from the city council on FGD held at the city level on 28/02/2018

<sup>127</sup>Tariku Birasa- From investment office, Fikadu Geremew- From environmental authority and Aschalew Biru- From office of workers and social affairson FGD held at the city level on 28/02/2018

The regional state is also responsible for the failure of environmental responsibilities at the city level. The regional state is responsible for giving license of investment project, and most of the EIAs are approved at the regional state level. The regional state should supervise the performance of environmental authority of local government. However, the regional environmental authority could not adequately oversight the performance of environmental activity at the factory level to check the implementation of environmental programs at the city level. The regional state could not provide the directives which support environmental performance at the local government level; its activity to enhance the capacities of local environmental authority is also weak. There is also a weakness in over sighting the performance of environmental authorities of the local government<sup>128</sup>.

### **Conclusion**

Despite the fact that industries in the city of Burayou are positively benefiting the community living near the industrial areas, they are causing pollution on environment. They are causing health problems such as asthma, common cold, scenes, lung disease, heart case disease, pneumonia, skin disease, Bronchitis and etc. on human health. It is also causing health problem on cattle around industrial areas. This is due to lack of awareness on the environmental issues, lack of commitment and coordination of environmental sectors at the city level and lack of taking corrective measures on pollutant factories in the city. There is no coordination in environmental planning and implementation among environmental sectors at the city level. There is also lack of accountability at the city level on the environmental issues. In this regard, no one became accountable for approving wrong EIA from the government side; no factory became accountable for not having EIA, not implementing EIA and for wrong environmental doing at the city level and no environmental cases were presented before court in the city.

At the city level, there was also a problem of respecting the city's master plan. Many industries which are causing environmental pollution in the city are located in the residential areas. This shows the environmental issue was not the concern of the city administration that is why factories are established in the residential areas.

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<sup>128</sup>Fikadu Geremew- From environmental authority, Yobdar Genati- From office of Municipality, and Gebeyo Debisa- from health office on FGD held at the city level on 28/02/2018

Besides, the attention given to the issue of environmental protection at the city level by the city administration is very weak. The city administration did not provide adequate budget, logistics and political support to strength the capacity of environmental authority of the city. Similarly, the environmental issue was not the concern of the city council. There is no time where the authority presented its environmental report to the city council and the standing committee of the city council was not in a position to make supervision on environmental performance of the city's environmental authority.

The city's Environmental Authority suffers from serious capacity problems to perform environmental activities at the city level. It doesn't have adequate and qualified environmental professionals at its disposal. It also lack adequate budget to fill the existing gaps in human power and it also suffers from lack of logistics to carry out adequate environmental supervision at the factory level. Besides, absence of environmental regulations and directives hindered the authority to carry out effective environmental performance at the city level.

The public participation in environmental protection issues is weak in the city. There are no coordinated environmental forums in which publics decided on the environmental issues at the city level. Nonetheless, there is no regulation and directives to coordinate public participation at the city level. There is also lack of focus for public participation in environmental decision making from the city administration and the city's environmental authority side.

At the factory level the environmental protection has not become an issue. As a result, there is weak environmental performance at the factories level. EIA and environmental management plans are not changed into practice in most of factories in the city. Most of the factory owners and managers have lack of awareness on environmental laws. There are no environmental unite established at the factories level and no environmentalist exist at factories level. So, the main focus of factories is maximizing business rather than environmental issues that is why they release pollutants without significant treatment. This is resulted in a very weak reporting to the city's environmental authority on environmental audits of factories.

The EIA at the city level is also suffering from quality problem. Most of the time the EIA study, does not address the circumstances existing at the ground. There is a weak public participation in the process of EIA at city level. Multi discipline experts are not engaged in the study of EIA; the

study is carried out by single experts. Similarly, it is reviewed at the city's authority level by single expert. This has an impact on quality of EIA at the city level.

The city has also a problem of solid waste landfill. In this respect, there is no selected planned land fill in the city. The land fill which now a day the city used it as a dump site, was not properly selected and it is located near the residence areas causing a serious health problem in the residents. The city administration was not also giving priority for construction of the permanent landfills of the city.

There is no adequate awareness on handling of wastes from the public sides. As a result, in the city waste is thrown everywhere including in river basins. In addition, there is also a problem of logistics and budget in managing solid wastes of the city. The body which coordinates the waste management of the city is not given significant attention both by the city administration and municipality and it has a very weak capacity to coordinate management of solid wastes at the city level.

With respect to responsibilities of city's environmental authority, the authority has a responsibility to supervise all factories and has a full power up to closing pollutant firms. This is a problem to local environmental authority in case of huge projects licensed by federal government. Similarly, all the responsibilities of regional environmental authority are given to the city's environmental authority which creates legal gaps in accountability. In general, the implementation of environmental program in the city of Burayou is at a weak stage.

## CHAPTER FIVE

### **Conclusion and Recommendations**

This chapter provides the conclusion and recommendations based on findings of the study. The study recommend some alternative which help for environmental policy options and implementation at the city (local level).

#### **5.1. Conclusion**

Now a day, the issue of environmental federalism is becoming a concern of federations. There is no common agreement over division of environmental powers among levels of government and there are debates over this issue arguing for centralization and decentralization of environmental responsibilities. Those supporting centralization argued that decentralization of environmental responsibility brings negative outcome. They argued that decentralization of environmental responsibilities resulted in race to the bottom as local governments compute to attract investment at the coast of environment. They also argued that decentralization of environmental responsibilities can cause local spillover effects because the local governments do not think about the influence of its projects over other jurisdictions. They also argued that decentralizing environmental responsibilities to local government can weaken the implementation of environmental programs as local governments do not have adequate expertise at local level.

In other hand, the decentralists argued that decentralizing environmental responsibilities to local governments enhances democratic participation of the community. They also argued that decentralization of environmental responsibilities helps the local governments to perform environmental activities according to the need of local communities and existing circumstance at the local level. It helps local government to adopt cost effective strategies when the cost of environmental protection vary from locality to locality. Likewise, environmental decentralization helps for policy innovation at local government level and it increases public control over environmental protection at the local government level and democratic self-governance. They also argued that decentralizing environmental power is helpful to decrease the fear that public representative may not stand for the need of the local community.

Others argued that either centralization or decentralization of environmental responsibilities cannot bring intended environmental outcome. It is the mix of centralization and decentralization

which can bring intended environmental outcome. Because some environmental issues needs centralization and other environmental issues needs decentralization. For instance, if environmental issues affect a nation as a whole centralization is important and if it covered specific localities for example in issues such as local waste sites needs more decentralization. Thus, division of environmental responsibilities among levels of governments will bring efficiency and accountability. The federal government should have responsibilities over the environmental issues which affect a nation as a whole, should provide scientific research and involve in the case of spillover effects. Besides, it should involve local governments, publics and other stakeholders in the process of policy formulation and there should be established IGR among levels of governments on environmental issues especially in multi-national federations.

The experience of USA and Brazil in environmental federalism shows how environmental responsibility is practiced in federations. Before 1970s environmental powers were highly decentralized in USA. During this time many environmental activities were facilitated at states and local level. However, since 1970s environmental power were highly centralized and there was high tendency of formulating uniform standard with unfunded mandates which ought to be implemented at all states and local government level. Recently, the command and control approach of environmental governance in USA is changed into collaborative approach of environmental governance.

With regard to environmental power division in USA, environmental laws are enacted and environmental programs are managed at all levels of governments. Clean air, clean water and hazardous waste are the federal government responsibility. States can enact environmental laws consistence with federal government.

The profile of pollutant industries presents at the hands of environmental agency at the state and federal level in USA. The data of these pollutant industries are released every year on US EPA's website which helps to put pressure on pollutant firms for better improvement of environmental actions. Beside, to solve the coordination problem among environmental stake holders environmental protection department has been also established in USA. The judiciary in USA is also active in supporting implementation of environmental issues by supporting environmental protection agenda during its decision making.

With respect to IGR, there is institutionalized vertical and horizontal IGR in USA. There is planning partnership between US EPA and states, in which the federal environmental agency and regional state environmental agency jointly make plan every year, decide on environmental priority setting and sign partnership agreement for implementation of environmental programs. In addition, environmental council of states is also one of the IGR institutions which are playing an important role to solve differences between federal EPA and regional state. National policies and regulations are enacted by agreement of state, federal EPA, NGOs and other stakeholders. Where there is difference between federal EPA and states, environmental authority of states can present their case before court in USA. There is also established horizontal IGR between states in environmental protection in USA. Likewise, there are also established IGR among cities in USA to protect environment from environmental pollution. There are also established relationship between federal EPA and different industries in USA in protection of environment.

With respect to municipal wastes in USA, the management of municipal wastes is decentralized and policies are enacted at local government level. The local governments (cities) in USA are using recycling programs by introducing minimum requirements of contents of materials by banning non recycled materials. The cities are also used strategies of “pay as you throw” in which the people pay for throwing wastes.

Brazil is also one of the federal country in which environmental power is shared between the three levels of governments. The country has high problem of industrial pollution especially in South east areas of the country where industries are highly located causing a serious problem on the people living in this area. Water pollution and air pollution are a very serious problem of Brazil which is caused by mainly industries. The country used environmental tax system to control environmental performance of factories. The tax is used for monitoring and inspection of environmental activities of factories.

The environmental responsibility of municipalities of Brazil include: solid waste management, urban cleaning, water supply, sewage disposal and management of rain water. The environmental council in Brazil brings all levels of government together on issues of environmental protection of the country. The country is also known by the problem of waste management as its municipalities have been challenged by solid wastes. However, now there is a progress in the management of solid wastes in Brazil. The country is practicing recycling

program at municipality level. It also established “tack back system” in which recycled materials are returned back to distributors and distributors return back to producers for re production. The process is creating job opportunity and decreases pressure on landfills. The country is also in a movement to decrease open air landfills and there is an improvement to established protected landfills in Brazil.

In other hand, different literatures present about the significance of EIA in environmental decision making while development projects are carried out. The system is used to include effects which are likely to be caused by the project. It helps to forecast the impact of projects, reduce any adverse impacts of development projects, give information to affected community, provide information to decision makers and bring accountability and transparency in environmental protection. The process need to involve public in the decision making process and there should be public consultation in the process. In addition, the EIA should be practical, and should show real problem at the ground.

Public participation is also important for environmental policy formulation and implementation. Since citizens are well aware of environmental circumstance at the ground level, engaging public in environmental decision making brings quality in environmental decision. Involving citizens in environmental decision making helps to raise public environmental awareness, makes the government accountable to environmental issues as citizens become vanguard force for environmental protection.

In Ethiopia, environmental protection has been given due provisions in the federal constitution. The federal constitution provides basic frameworks for environmental protection of the country. In addition the environmental policy of the country has been formulated to give broad frameworks for the environmental protection of the country. This policy comprises the need for EIA for undertaking development projects. It also establishes the need for public participation in environmental decision making process. Moreover, the proclamation for environmental pollution control, proclamation for EIA, and other environmental regulations are enacted at federal and regional state level to protect the environment from adverse impacts. The country has also shown its commitment to international environmental obligations by signing a number of international treaties on the protection of the Environment. That said, it also becomes the speaker of all Africans in the international climate change dialogue.

The government has established structures and institutions of environmental protection at all level. At the federal level, the environmental protection institution is established as Ministry of Environment, Forest and Climate Change. This partly, shows the commitment of the federal government to establish strong environmental institution. At regional level, like in Oromia regional state, the Environment, Forest and Climate Change Authority has been established to deal with issues of environmental protection of the region. The regional environmental authority has also established environmental protection authorities at the local government levels. The institutions of environment at all levels of government have been trying to address issues of environmental protection by approving EIA and try to follow the environmental protection at all levels of government. Nonetheless, there are growing problems in the country in protecting the environment from industrial pollution. This has presented challenges to local government functions and life of the people.

This thesis found that there are a number of environmental laws which were enacted both at regional and federal government level. However, the existing environmental laws are inadequate to implement environmental protection programs at all levels of governments. Most of these laws are not only too broad but also impractical. The mechanisms to supplementary laws are important to implement environmental laws lack specific and detailed procedures that would help for resolving environmental problems. Neither, regulations nor procedural guideline has been enacted for implementing the environmental policy.

Most of the environmental directives and procedural guidelines are in a draft stage without getting approval of environmental council at the federal government level. Contrary, list of projects which are subject to EIA study is not stated in the EIA proclamation assuming that the coming directives can address the issue. Besides, the EIA proclamation focuses only on private projects rather than including the public projects in the EIA system this is also one of the defects of the existing environmental laws. There is also lack of standards for air and water quality in Ethiopia to protect the quality of air and water in the country. The environmental policy of the country which was approved in 1997 was not also amended to deal with the current circumstance of the country. There is also legal gap for public participation in Environmental decision making the law in this regard is too general and is not adequate to solve the existing gaps in this regard. A

compensation scheme for victims of industrial pollution is not also legally established by specific regulations and directives, and it is very broad to convert it into practice.

Environmental competences have been divided between federal, regional state and local governments in Ethiopia. The federal government has been given environmental responsibility such as formulating environmental policies, laws, regulations, directives, and reviewing environmental laws. It also has a responsibility to set environmental standards, establish environmental information system, coordinating and carrying out environmental researches and to review EIA when the project is subject to federal licensing and supervising its implementation. Furthermore, it has a responsibility to prepare periodic report on the state of the environment of the country, provide capacity building program to enhance environmental protection of the country and provide advice and technical support for regional states. The regional state has on its part has responsibility in coordinating the formulation, implementation and review of the regional conservation strategies.

The regional states also have a responsibility to carry out environmental monitoring, protection and regulation, ensure the implementation of federal standards and formulate and implement their own standard more stringent than the federal standard. The regions have the responsibilities to prepare reports on the state of regional environment and submit it to the federal environmental authority. Practically regional states have enacted different proclamations on environment. They have also a power to review full EIA for projects which are subjected to regional licensing. The urban local governments have also given an environmental responsibility. Accordingly proclamation No. 65/2003 a proclamation to establish urban local governments of Oromia, empowers those localities to provide sewerage line, waste disposal and controlling environmental pollution is the responsibility of urban local governments. This is however, the general responsibility which has been given to the city administration. There is no clear and appropriate division of power between regional EPA and the city's environmental authority. Practically, the city's environmental authority has given to review partial EIA and to control environmental pollution of all firms at the city level. But there is no legal basis for this responsibility.

There is no formal action of environmental compensation at all levels of governments and there is no identified data of victims at all levels of governments. In addition, there are no effective

measures taken on firms causing pollution on environment and human health. No one is legally punished by polluting the environment at all levels of government. There is also weak public participation on environmental policy making process of the federal government.

The IGR between the federal Ministry of Environment, Forest and Climate Change and Regional States Environmental authority is weak. The relationship is limited to sending report and receiving it. There is no environmental oversight which is made by the federal government to support the environmental performance of states and local governments.

In some extent, the ministry makes relation with regional states in providing capacity building programs. It also provides some guide lines and environmental laws to regional states. However, the capacity building programs are not adequate and demand driven and does not take into account the capacity gaps of regional states. There are also gaps in providing scientific environmental research to enhance implementation of environmental programs at regional states and local government levels. The ministry also becomes reluctant to formulate legal frameworks which bind public projects from causing pollution on the environment. Most of the government projects come into operation without having EIA and environmental management plan.

The EIA which are performed at all levels of government also lacks quality during its preparation and do not pass through necessary steps stated in the proclamation. The supervision to validate the study report has been inadequate. The public consultation in the process of EIA and implementation the same hardly exists. There is no environmental audit report at all levels of government. Consequently, there is no data of pollutant industries at all levels of government. There has been lack of accountability in case of failure of discharging environmental activities from the government side; and no single case on environment has come out in courts.

The regional state of Oromia, a regional context of this study, has enacted different environmental proclamation to protect environment from pollution. Currently, the regional environmental authority has tried to take some corrective measures on pollutant industries. With growing problem of the industrial pollution in the regional state, the implementations of environmental laws are in a weak state. Like the federal environmental laws, the regional environmental policy implementations are not supported by regulations and directives to implement environmental laws of the regional state.

The public participation in environmental decision making of regional state is weak and the regional state environmental authority do not provide procedural guidelines to enhance public decision making in the regional environmental issues. This also impacted public participation and decision making in the local environmental issues. In addition, the regional state did not provide adequate capacity building programs to enhance the capacities of local governments in implementation of environmental programs of local governments. The regional environmental authority does not make supervision to identify the gap of local government and to give institutional support for the environmental authorities of local government. There are also weak oversights of existing pollutant factories; the supervision at factory level is inadequate to solve the existing problems at factory level. It lacks adequate materials such as laboratory to test the existing pollution and to take actions on pollutant industries and it lacks adequate professionals to carry out environmental programs of the regional state.

Furthermore, at the regional state level, the system of EIA is filled with quality and procedural problems. It lacks quality and adequate public consultation. The follow up process of the implementation of EIA is very weak. Accountability is not established for doing and approving EIA. Similar to the federal government, the reporting system of environmental audit to the regional environmental authority is not established and there is no any data of pollutant industries and victims of pollution in the regional state and there is no practice of compensation at the regional state level.

At the city level there are some attempts by the city environmental authority to supervise the environmental problems existing at the factory level. The authority tries to review partial EIA and try to follow its implementation and they are trying to give advice to firms to change its impacts on environment. However, with growing industries in the city, the environments near these industries are highly polluted. Some factories operate their activities without having environmental competence certificate. Some factories in Burayou operate with license from Addis Ababa City without approval of the Burayou city's environmental authority. Some factories made expansion without getting approval from the city's environmental authority. There is no implementation of EIA and environmental management plan at the factory level to solve the existing pollution. Most of the factories release waste to the environment without any treatment.

Particularly, the factories, which were observed by the researcher, have no EIA and management plan at their disposal and they did not have any concept of EIA and environmental management plan. There were no environmental experts at the factories level to facilitate environmental programs. There were no resources or budget allocated for environmental activities at the factory level. Most of the factories at the city level did not present environmental performance report to the city's environmental authority. The factories give due attention to maximize profit without doing the same to environmental matters. They release pollutant into the environment which is causing serious health problems on people, their cattle and environment in general. Peoples living near factories are affected by asthma, lung disease, heart case, pneumonia, allergic, skin disease, seines and bronchitis and many cattle were died as a result of industrial pollution in the city.

Several factors have hindered the protection of the environment from industrial pollution. These factors, as identified by this study include: lack of commitment for implementation of EIA and management plan, low awareness of the public on environmental issues, lack of adequate supervision by the city's environmental authority, lack of giving appropriate institutional support by the city administration to the city's environmental authority, lack of taking appropriate corrective measures, lack of binding legal frameworks. There is also lack of coordination between the environmental authority and the office of trade in the city. Most of the time the office of trade renewed the trade license for industries before renewal of environmental license by the city's environmental authority. In addition, most of the pollutant industries are located in the residential site of the city. At the city government level there was no any attention given to issues of environmental protection. This resulted in allocation of industries near residential areas. These factories are not in opposition to have management plan to decrease its impact on communities living around their area and there is no trial to relocate this industries to industrial zone of the city.

The city's environmental authority lacks institutional capacity to protect the environment from industrial pollution. There are inadequate staffing and unqualified professionals at the city's environmental authority's level; and logistical constraints for performing environmental supervision at the factory level.

The solid management of the city is also one of the existing problems and which is not resolved by the city administration. The land which was assigned for the construction of solid waste landfill has been covered by illegal settlements and the city administration is not able to secure the land from illegal settlements. This is causing a serious health problem on the people living around this area.

Similarly, there is lack of EIA quality during its preparation and low enforcement of the studied EIA by proponents at the factory level. There is no adequate public consultation on EIA and other environmental issues of the city. There are no adequate and timely public forums at the city level to give awareness to the public and to enhance public decision making on environmental issues of the city. Besides, there is a weak performance to take actions on pollutant factories by the city's environmental authority.

In general, the issue of environmental protection at the city level has not become an agendum of all stake holders at the city level. The city administration did not give significant attention to the environmental protection agenda that is why the sector is not given institutional support similar to other sectors of the city. The city administration has not been dedicated to reduce impacts of the firm under its control. In this case, the treatment plant for municipality owned abattoir, its construction started before five year, it was interrupted and is not finished until now. In addition, the city council has not made environmental agenda; and there is no time when the standing committee heard the authority's report and the city council is too.

In a nutshell, at all levels of government institutions have been established to enhance environmental protection. Legal frameworks have been enacted to protect the environment from the existing pollution. The practice of protecting the environment from industrial pollution is at its infant stage and needs further efforts and commitments from all levels of government and all stake holders.

## **5.2.Recommendations**

Based on the findings of this research, the researcher provides some recommendations that may be considered by the multiple levels of government in the federation of Ethiopia.

### **5.2.1. Recommendations for Federal Government**

1. It is better to provide environmental laws in areas which need further legislation and there is a need for providing up-to-date environmental regulations, directives and procedural guide lines in order to support the environmental implementation. There is a need for this level of government to amend the existing environmental policies and laws to suit it with the current circumstance of the country.
2. Adequate capacity building programs to the regional states and urban local governments enhances the implementation of environmental programs at the regional state and local government level. It had better if this level of government provides adequate capacity building trainings for state and local governments. There is a need to give capacity building trainings by federal government to strength the environmental performance at the local level because the environmental authority at local level controls environmental activities of all factories including those under federal licensing. The federal government should also provide adequate scientific research on environment to regional states and local governments to enhance their performance.
3. There is an urgent need for IGR for coordinating environmental sectors in both vertical and horizontal dimensions; and the federal government commitment is essential in this regard. It is better if federal government adequately oversights environmental performance of regional states to support the existing gaps in environmental performance. There is a need to participate local governments, publics and all stake holders in the formulation of environmental laws at federal level.
4. There is a need for federal government to provide environmental information system and there is a need to have data of pollutant firms at its disposal. It is also important to give adequate environmental awareness to public, factory owners and other through different systems including media.

5. Establishing accountability is also needed to solve the environmental problems caused from government side, proponents and consultancies and more practice is needed in this regard.

### **5.2.2. Recommendation for Oromia Regional state**

1. There is a need for regional state governments to build capacity of regional environmental authority in terms of human, budget and logistics. There is also a need for regional state environmental authority to provide adequate capacity building programs for local governments to support environmental performance of local environmental authorities.
2. There is an urgent need for IGR for coordinating environmental sectors in both vertical and horizontal dimension and the regional state commitment is essential in this regard. It is also better if regional state establish horizontal intergovernmental relation with Addis Ababa city administration to control the flow of pollutant factories into the regional state.
3. It is better if the regional environmental authority adequately follow the validity of EIA which is presented by consultants and if it provide the reviewed EIA to public for real decision making.
4. There is a need for regional state to establish environmental information system in which the factories under its control should report to it and it had better if the regional environmental authority has data of pollutant industries and data of victim of pollutants so that it help for the decision making and further actions to improve the existing problem in this regard. .
5. There is also a need to establish accountability in the issues of environmental protection in which the wrong doers on environment should be accountable in the regional state and more practice is need in this regard. There is also a need to establish legally determined responsibility between regional state environmental authority and local environmental authority to establish accountability in this regard.

### **5.2.3. Recommendations for the city administration**

1. There is urgent need from the city administration to have political commitment to the issues of environment in strengthening the capacity of environmental sector in terms of adequate and skilled professionals, logistics and finance. Likewise, it had better if the city council made environmental issue its agenda and made adequate supervision and give institutional support in the protection of the environment at the city level

2. There is a need from the city administration/ the environmental authority side to involve the public in the environmental decision making and arrange public forums to discuss on the environmental plan and performance of the authority and EIA system in the city. There is also a need to provide environmental awareness for factory owners/managers on the issues of environment and environmental policies to engage them in the environmental protection at the factory level
3. There is a need to adequately oversights and take corrective measures on pollutant firms when the factories failed to improve their environmental performance
4. There is a need to relocate most pollutant factories from the residential areas
5. There is a need for city administration to give priority for solid waste land fill of the city and the construction of proper landfill ought to be carried out by clearing the area which is filled by illegal settlements.
6. It is important if the city administration strengthen the capacity of waste management institution by establishing independent waste management agency as of Addis Ababa and other cities having its own budget and logistics

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## APPENDICES

### Appendix A: Profile of Study Participants

#### I. Key Informants

No.	Name	Sex	Occupation/Status	Date of Interviews
1	Yeron Tekalegn	F	EIA expert of the city's environmental authority	23/02/2018
2	Fikadu Geremew	M	Legal expert of city's environmental authority	21/02/2018
3	Bayisa Ketema	M	Head of the office of Mayor of Burayou city	26/02/2018
4	Kabeto Albe	M	House speaker of Burayou city council	27/02/2018
5	Desalegn Tafa	M	Head of the environmental authority of the Burayou city	08/03/2018
6	Shumi Negash	M	General director of climate change directorate of the Oromia regional state environmental authority.	19/03/2018
7	Bona Yadesa	M	Vice Director of Oromia regional state environmental authority	20/03/2018
8	Sanait Dinka	F	Expert of EIA of oromia regional state environmental authority	21/03/2018
9	Bekele Wakjira	M	Environmental supervisor of Oromia Regional State Environmental authority	21/03/2018
10	Dr. Ayele Hagen	M	General Director of policy and Legal Directorate of the Ministry	28/03/2018
11	Yohanes Ameha	M	EIA Expert at Fed. Min. of Env.	29/03/2018
12	Daud Mume	M	Director General of plan and Budget at the Ministry	02/04/2018

13 Shifera Negash M Director General of EIA at the Ministry 03/04/2018

II. Participants of Focus Group Discussions(28/02/2018)

No	Name	Sex	Sector
1	Gebeyo Debisa	M	Health
2	Guta Hambisa	M	City council
3	Yobdar Geneti	F	Municipality
4	Tariku Birasa	M	Investment
5	Fikadu Geremew	M	Environmental authority
6	Aschalew Biru	M	Workers and social affairs

III. Interviewer at factory level

No	Name	Sex	Factory	Responsibility	Date
1	Meskerem Getachew	F	Kebron food complex	Quality control Manager	22/02/2018
2	Mohamad Siraj	M	Altewokelti food complex	General Manager	23/02/2018
3	Alsar Juwar	M	Afia food complex	Financial Manager	23/02/2018
4	Hiwot Ingida	F	Selam cosmetics	Manager	23/02/2018
5	Teka Dibaba	M	Burayou abattoir PLc	Member of executive committee	01/03/2018

## **Appendix B: Guiding Questions for informants**

### **Part I: Interview guideline questions for informants from the Federal Environmental Authority**

#### **On Federal Policy and Legal Frameworks of industrial pollution**

1. Are there adequate policy and legal frameworks for regulation of environmental problems in general and control of industrial pollution in particular?
2. What are the powers and responsibilities of the federal environmental authority for the regulation of environmental problems in general and control of industrial pollution in particular?
3. What is the legal basis for the EIA proclamation? How do you see the nexus between EIA proclamation 299/ 2002 and investment proclamation 375/ 2003? Are they compatible?

#### **On Federal Environmental Impact Assessment (EIA)**

1. How are EIAs prepared before the launching of projects?
2. To what extent is the preparation of EIA free from institutional and individuals influence? Does it strictly follow the principle and standards of EIA? Are there mechanisms of ensuring the validity and content of the EIAs? Does your organization have the required skills for following up the standard of EIAs?
3. Is the process of EIA consultative? Does it adequately consult those who can be impacted by the environmentally sensitive projects?
4. Are there data of Pollutant industries in Ethiopia? How many factories fully implement EIA? Do these factories report about the implementation of EIA to the Federal Environmental authority? If no, what are the reasons for not reporting? What measures have been taken on factories that are not in a position to report to Environmental Authority?
5. If the environmental authority wrongly approves unqualified EIA what measures will be taken? Is there clear line of accountability?
6. What are the challenges for effective implementation of EIA in Ethiopia federation?
7. According to the Proclamation, the Publics are given only 15 days to discuss on environmental impact assessment report before the project go into implementation is it enough days for public comment? Why only 15 days are given for public comment?

8. Is there a clear procedure for public participation? Do these procedures function at all levels of governments?
9. How do EIAs operate in urban areas? Does your organization have any relation with environmental sectors at the urban local governments beyond Addis Ababa and Dire Dawa?
10. How does the environmental authority follow the implementation of the project within a given time frame? Because most of the time projects are not started or finished within the given time framework of authorization?

### **On Intergovernmental Supervision of Environments**

1. Who regulates the environment?
2. How does the Environmental authority supervise the implementation of EIA at urban local and the factory level?
3. To what extent does the Federal Environmental authority facilitate environmental regulations which help the state and local governments for effective environmental performance? What are the existing problems in this regard?
4. How the Environmental authority oversees, evaluate and intervene /taking measures in the environmental performance of states and local governments? How much the Federal oversight help for improvements in the environmental performance of regional state and urban local governments?
5. How the Federal governments build the states and local governments' capacity for effective implementation of environmental programs? How many times in a year?
6. Does the EPA adequately provide scientific research on environment which helps the states and local governments to effectively implement environmental policy and programs?
7. Are there environmental forums in the federation? What environmental matters have been tabled on such forums, if any? What environmental issues have been addressed by the forums? How regular are these forums? Who organize the forums?
8. Who finances environmental activities? What is the source of fund for addressing environmental matters in the federation? Does the federal government disperse money to lower governments? Is the environment dependent on government budget or donor money?

9. Does the delegation of power and functions on environmental issues carry adequate funding from the federal government?
10. Are there adequate/strong vertical and horizontal coordination among the environmental sectors operating at different scales and levels? How much enough is the field visit and supervision at the factory level?
11. If industries/ factories fail to implement the EIA and detrimentally affect the environment, what measures are taken by your authority? Can you give me any concrete examples of expressing such cases? Are these cases from urban or rural setting? Are these factories been punished for not implementing EIA?
12. What are the key factors that hinder the Authority's capacity to take measure on pollutant industries/ factories?
13. How do you see industries which carried out its activity with other license/ performing other activities without approved EIA? How many factories are penalized in this regard?

#### **On Federal Compensation Schemes for the Environmental Victims**

1. Whether there are environmental victims in Ethiopia? Are the victims identified already? Who are these victims?
2. Are federal Compensation Schemes for the Environmental victims in Ethiopia?
3. How many victims are compensated because of industrial pollution by the federal environmental authority?

#### **On Public Participation in the Federal Environmental Policy and Decision Making**

1. Was there enough discussion on environmental policy and regulatory frameworks? To what extent are the stakeholders and public involved in the environmental policy formulation?
2. What are the tools for ensuring transparency and accountability in the environment? Are there is there clear rules and procedures for including public voices in environmental decision making at all levels and scales?

#### **On Federal Environmental Structures**

1. Is the structure of environmental sector adequate to effectively implement environmental policies and program?

2. Does EPA have adequate environmental expert at the Federal level?
3. How much budget assigned to EPA helps the authority to better implement of environmental policy and program?
4. Does the environmental council at the Federal level adequately support the implementation of environmental objectives in Ethiopia? To what extent is the Environmental council functional in Ethiopia? How many times the council meet in a year? How many times the council made meeting since its establishment? What environmental resolutions were passed by the environmental council during its meetings? What is the problem behind the environmental council?

**Part II: Interview Guideline Questions for Informants from the Oromia Regional State Environmental authority**

**On the Regional Environmental Policy and Legal Frameworks and Industrial Pollution control**

1. How much the legal frameworks are effective for environmental protection in the region?
2. There is no ratified procedure for implementation of EIA why? All the specific procedures are draft procedures which does not have legal ground.
3. Is there legal framework for public participation?
4. Why the regional state governments couldn't fill the existing legal gaps?

**On the State of the Regional Environmental Impact Assessment**

1. What is the role of the regional government or the regional environmental authority in the preparation of EIAs before the launching of the environmentally sensitive projects?
2. To what extent is the preparation of EIA in the region free from institutional and political biases?, Does it follow the basic principles and standards of EIA? How do you ensure the content and validity of EIA in the region? What regulatory mechanisms are put in place in case the EIAs do not match the established principles and standards?
3. Is the process of EIA consultative? Do the concerned people and potential victims of environmental problems adequately consulted in the region?
4. How many factories fully implement the standard EIAs in the region? Is there data of Pollutant industries in regional state? And how many factories are reporting about the

implementation of EIA to the regional Environmental authority? If the industries or factories in/under the region could not regularly report on their implementation of EIA, what are the regulatory mechanisms that the region puts in place? Are there case scenarios reflecting this condition in the region?

5. Is there clear line of accountability, if there is approval of unqualified EIAs in the region?
6. What do you think is the main problem of EIA in the region- preparation, implementation or both?
7. What are the challenges for effective implementation EIA in Oromia ?
8. According to the proclamation/ regulation, 15 days are allotted for public consultation and discussion on EIA before the implementation of the project? Are there enough days for public comment? Why only 15 days are given for public comment on EIA report?
9. Is there a clear procedure for public participation? If public participation is not enough on the EIA what measures will be taken?

#### **Regional Environmental Supervision: Regulation, Monitoring and Evaluation of EIA**

1. How does the regional state Environmental authority supervise the implementation of EIA at the urban local and factory level?
2. How much the Federal Environmental authority facilitates environmental regulations which help the state and local governments for effective environmental performance? What are the existing problems in this regard? How much the regional state provides regulations which help the urban local governments to implement the environmental program?
3. What sort of intergovernmental relation exists in the regional state with regard to environmental issues?
4. What are the mechanisms of supervision? Are they effective and sustainable? How the regional state Environmental authority oversights, evaluate and intervene /taking measures in the environmental performance of local governments?
5. How the regional state Environmental Authority builds the local governments“ capacity for effective implementation of environmental programs? How many times in a year?

6. Is there institutionalized IGR between the regional state and federal; and federal and regional states? Is there responsible body at the regional state level which coordinates intergovernmental relation among the regional state environmental sectors?
7. How much EPA has collaboration with stake holders /other sectors, peoples, different organizations, investors and academic institutions in environmental protection?
8. What measures are in place to punish the factories/ industries? Who fail to implement EIA? Are there concrete cases in this regard? Does the regional environmental authority have a mandate and capacity to regulate EIA? Is it effective and functional?
9. What are the main factors that constrain the supervisory role of regional authority?

### **On Compensation Schemes for Environmental Victims**

1. Are the victims of industrial pollution identified in the region? Who are they?
2. How many people are victims of industrial pollution in the regional state?
3. Are there compensation schemes for victims of industrial pollution? How many victims are compensated in the regional state because of industrial pollution? (For example, for industrial pollution which causes damage on cattle and human being)?
4. Are the compensation schemes (if any) legally guaranteed?

### **On Public Participation in the Regional Environmental Policy Implementation**

1. Is the process of EIA consultative? Are the public and victims of the environmental problems adequately consulted?
2. Is there enough discussion on the regional environmental policy and other related proclamations? How much all parts of the community: Public, Environmental group/ academicians and politicians and all concerned bodies are participant of on environmental policies and other related environmental issues?
3. How publics are engaged in Environmental decision making- is there rules, procedures, actions, for awareness or for regulation and implementation?

### **On Regional Environmental Structural Organization and Institutional Adequacy**

1. Are the structures and institutional settings adequate for effective implementation of environmental policies and programs in the region?
2. Are there adequate human power in EPA having the relevant environment related training, knowledge and skills at the regional level?
3. Is the budget allocated to the regional state EPA enables the authority to implement environmental policies and program? What is the source of the regional environment related fund? Is the source of fund reliable and sustainable?
4. Does the environmental council at the regional state level adequately support the implementation of environmental objectives in the regional state? Is the regional Environmental council functional anyway? How many times the council meet in a year? What environmental resolutions have been passed by the environmental council during its meetings? What are the strength and drawbacks of the regional environmental council?

### **Part III: Interview Guideline Questions for Informants from the City Administration of Burayou**

#### **On the State and regulatory mechanisms of Industrial pollution in Burayou**

1. What are the existing industrial pollutions in the city of Burayou?
2. What are the causes of industrial pollution in the city?
3. What are the regulatory mechanisms for controlling the industrial pollution in the city? What are the responsibilities and mandates of Environmental sector of the city of Burayou in protecting the environment and controlling industrial pollution? Is the autonomy of the city adequate to address the environmental issues in the city?
4. Why are these regulatory mechanisms (in) effective? Would you explain, please? Probe!

#### **On the City Administrations role in the Environmental Impact Assessment**

1. What is place of the city administration or the environmental sector in the conducting EIAs before the launching of the project in the city?

2. To what extent is the city involved in preparation of EIA for industries operating in the city?
  - 2.1. Does the city's participation in EIA from regional and industrial influences?
  - 2.2. Does the EIA in the city follow the basic principles and standards? How do you ensure the content and validity of EIA from the city's perspective?
  - 2.3. What regulatory mechanisms are put in place in case the EIAs do not match the established principles and standards?
3. Is the process of EIA in city consultative? Do the concerned people and potential victims of environmental problems adequately consulted in the region?
4. How many factories fully implement the standard EIAs in the city? Is there data of Pollutant industries in city?
  - 4.1. And how many factories are reporting about the implementation of EIA to the city's environmental authority?
  - 4.2. If the industries or factories in/under the city could not regularly report on their implementation of EIA, what are the regulatory mechanisms that the region puts in place?
  - 4.3. Are there case scenarios reflecting this condition in the region?
5. Is there clear line of accountability, if there is approval of unqualified EIAs in the city?
6. What do you think are the main problem of EIA in the city of Burayou- preparation, implementation or both?

**On the City of Burayou's Environmental Supervision: Regulation, Monitoring and Evaluation**

1. Who supervises the environment and industries in the city?
2. How does the city's environmental sector supervise the implementation of Environmental impact assessment at the industry and factory level?
3. How often the city does supervise the factories / industries in the city? What are the purposes of the supervision (if any)? Is this supervision meaningful and effective?
4. What are the mechanisms of regulating the implementation of EIA in the city? What measures have been taken on those that didn't comply with the EIA? Can

you provide such industries or factors that have been failed to perform according to the EIA?

5. What detrimental effects are observed as result of not implementing EIA in the city?
6. What are the main factors that constrain the regulatory role of the environmental sector at the city level? Would list them down?

### **On the City of Burayou Compensation Schemes for the Environmental Victims**

1. Are there clear compensation schemes for environmental or industrial pollution victims in the city of Burayou? Are these schemes legally guaranteed?
2. How many people have been vulnerable to industrial pollution in the city? What section of the society and part of the city are exposed to such pollutions? Did they get compensation for the effect of industrial pollution?

### **On Public Participation in the EIA and Environmental decision making in the city**

1. Is the process of EIA and other environmental decision makings consultative? Are the public and victims of the environmental problems adequately consulted in the city?
2. Is there enough discussion with relevant stakeholders on the effects of industries on the environment?
3. How publics are engaged in Environmental decision making in the city? Are there clear rules and procedures for doing so?
4. What are the key challenges for ensuring public participation in the environmental matters in the city?

### **On Industrial, Solid Waste Disposal and Obituary Sites**

1. How do you see the industries located in resident areas causing environmental pollution on residents of the city?
2. What are the causes for planting industries in the resident sites?
3. Why the city administration could not solve this existing problem?
4. Why the city could not provide adequate land fill for solid waste disposal?

5. What are the problems observed due to lack of land fill in the city? How serious is the effect of this on the environment issues? How do you see the public concern in this regard?
6. One of the two Obituaries which had a bad smell and affected the residents of the area is the municipal Obituary, how the environmental sector of the city supervises the problem?
7. Why the city administration could address this matter?
8. How do you think shall this be resolved in the future?

### **On the city's Environmental Structure and Institutional Adequacy**

1. Is the structure of the environmental sector adequate for the implementation of environmental policies, program and projects?
2. Does the environmental sector have adequate human power –quantity, knowledge and skill- experts at the city level?
3. How much budget and logistics are available to the sector for to efficiently implementing the environmental policies, program and projects?
4. Is the environmental council at city level functional? What functions have been performed, if any? Does the council adequately support the implementation of environmental program?

### **On Intergovernmental Supervision on Environment and Industrial Pollution**

1. Do the Federal and regional state governments timely enact environmental regulations which help the urban local governments for implementation of environmental protection programs?
2. Do the Federal and regional states oversights helped in the improvement of the urban local government environmental performance?
3. Do the capacity building programs of the Federal and regional state governments are enough for the effective implementation of the environmental protection program of urban local governments?
4. Is there coordination among environmental stake holders sectors at the city level?
5. What are the existing problems in coordination between environmental stake holders at the city level?

#### **Part IV: Interview Guideline Questions for Informants from the City Council**

1. Does the city council formulate directive for effective implementation of environmental programs at the city level?
2. What are the existing problems in this regard?
3. How many times the council hears the Environmental Sector report since the establishment of the council?
4. How many times the councils standing committees supervises the performance of the council since the establishment of the council?
5. Does the council have a special agenda on the issue of environment? Since its formation how many time the council reserved time for the agenda of environment?
6. Did the city council identify the problem related to industrial pollution? How many times the existing problem is reported to the regional government if it is above the Capacity of the city council?
7. What are the existing problems in this regard and what should be a solution for the future improvements?

#### **Part V: Interview Guideline Questions for Informants from industries /Factories**

1. How much EIA include all the content that EIA should include?
2. Is there a document of EIA study and Environmental Management plan at the factory levels?
3. Is there a body which facilitates the implementation of EIA at the factory level?
4. What hindered the factories to change EIA studies into practice?
5. Is there periodic report on the implementation of EIA to the environmental sector?
6. Is there environmental audit within the factory? What is the strength and weakness of factory in the implementation of EIA?

#### **Part VI: Guiding questions for Focus Group discussion with stakeholders in the environmental issues in the city?**

1. What are the factors that have been contributing for the industrial pollution and mismanagement of solid s waste disposal in the city of Burayou?

2. What are the challenges for resolving the extant existing environmental and industrial pollution in the city of Burayou?
3. To what extent are the relevant stakeholders coordinating and partnering in addressing environmental problems in the city of Burayou?
4. Who do think is responsible for regulating environmental problems in the city of Burayou? What are the institutional weaknesses at all the scales and levels of governments: Local, State and Federal?
5. What do you think are the alternative mechanisms for improving the detrimental consequences of industrial pollution in the city?

## Appendix C: Questionnaires for Respondents at local level

**Addis Ababa University**  
**College of Law and Governance Studies**  
**Center for Federal and Governance Studies**

Dear Respondents,

This questionnaire is been designed to collect data for the MA Thesis entitled: „Federalism and Environmental Policy in Ethiopia: the Case of Burayu City, Oromia“ at center for Federalism and Governance Studies of Addis Ababa University. I kindly request you to provide accurate information with respect to the following questions on the environmental policy in the Ethiopian federation at large and the implementation of the same in city of Burayou, Oromia. The answer you give is highly valuable, and the information gathered will be confidential and will solely be utilized for the purpose of this research. I am, therefore, grateful for your attention and for the time you devote.

**Thanks so much in advance!**

### **Part I. General Information**

1. Age \_\_\_\_\_
2. Kebele: \_\_\_\_\_
3. Sex: Male  Female
4. Occupation: \_\_\_\_\_
5. Educational Level:  Certificate  College Diploma  First Degree   
Post Graduate Degree

### **Part II: Assessing the impact of Industrial pollution on the local community in the city of Burayou**

**Instruction:** The following statements are designed to assess the impact of industrial pollution on local community/ residents in the city of Burayou. I kindly request you to fill the questionnaire with right answers you think is correct.

1. How do you rate the public awareness on the environmental impacts of industries the city of Burayou ?
  - A. Very high
  - B. High
  - C. undecided
  - D. low
  - E. Very low
2. How often are Public forums held on the environmental issues including plan and report in the city of Burayou?
  - A. Once a year
  - B. Two times a year,
  - C. three times
  - D. Four times
  - E. not at all
3. Do the local communities participate in the environmental decision making in the city of Burayou?
  - A. Yes
  - B. No,
  - C. I do not know
  - D Other, specify\_\_\_\_\_
4. How do you rate the participation of the public in the environmental impact assessments in city of Burayou?
  - A. very active
  - B. active
  - C. undecided
  - D. weak,
  - E. very weak
5. Can the Environmental Sector at the city level resolve the detrimental effect of industries in the city?
  - A. Yes
  - B. B. No
  - C. I don't know

Other specify \_\_\_\_\_

6. If your answer to question above is No, could you state the reason?

\_\_\_\_\_

7. How do you perceive the capacity of the city of Burayou in regulating/controlling the industrial pollution?

A. Very Strong

B. Strong

C. Undecided

D. Weak

E. Very Weak

8. To what extent does the city resolve the consequences of industrial pollution in the city?

A. to a very greater extent

B. to a great extent

C. Undecided

D. to a lesser extent

E. to a very lesser extent

9. Which level of government do you think can effectively control the industrial pollution in the city?

A. City of Burayou

B. Regional state of Oromia

C. Federal Government

D. City and the Region

E. Region and federal

F. City, Region and federal

G. Other, Specify \_\_\_\_\_

10. What do you think are the main causes for existing environmental and industrial pollution problems in Burayou?

a) \_\_\_\_\_

b) \_\_\_\_\_

c) \_\_\_\_\_

d) \_\_\_\_\_

e) \_\_\_\_\_

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11. What are the positive impacts of industries to the public living nearer to the industrial Zones in the city of Burayou? Would you list them down?

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12. What are the negative effects of industrial pollution on human, animals or other biotic life in the city of Burayou? Would you list them down?

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13. What are the problems of waste disposal management in the city? Would you list them down?

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14. What do you think should be done to resolve the existing problems of industrial pollution in the city of Burayou?

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15. What do you think should be done to resolve the existing problems of landfills in the city?

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16. Would you recommend any further option to resolve environmental problems in the city of Burayou?

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**Yuniversiitii Finfinneetti**  
**Kollejjii Seeraa fi Bulchiinsaa**  
**Wiirtuu Qu'annoo Federaalaa fi Bulchiinsaa**

Kabajmtoota deebii kennitootaaf ,

Gaaffiin kun qorannoo Digrii 2ffaa(MA) gaggeessuuf daataa ittiin sassaabbachuuf kan qophaa'eedha. Federaalizimii fi Imaammata EegumsaNaannoo Itiyooophiyaa keessatti : Qo'annoo dhimma Magaalaa Buraayyuu, Oromiyaa , Wiirtuu qo'annoo Federaalizimii fi Bulchiinsaa Yuuniversiitii Finfinnee. Gaaffilleewwan armaan gadii imaammata Eegumsa naannoo Federaalawaa Itiyooophiyaa sadarkaa olaanaattii kan ilaalu fi raawwiin isaa kan nannoo Oromiyaa keessaa kan Magaalaa Buraayyuu bali'inaan kan ilaalu waan ta'eef deebii sirrii ta'e akka naaf kennamu abdachaa gaafilee armaan gaditti ibsaman akka naaf deebistan kabajaan gaafadha. Deebiin isin kennitan sadarkaa olaanaatti gatii kan qabuu fi odeeffannoon sassaabame kaayyoo qorannichaa qofaaf kan fayyaduu fi iciitiin isaas kan eegame dha . Kanaafuu , xiyyeeffannoo itti kennuu fi yeroo keessan aarsaa gochuu keessaniif guddaan galateeffadha .

Duraan dursee baay'een isin galateeffadha.

**Kutaa I. Odeeffannoo Waliigalaa**

6. Maqaa \_\_\_\_\_
7. Ganda : \_\_\_\_\_
8. Korniyaa : Dhiira  Dubara
9. Hojii : \_\_\_\_\_
10. Sadarkaa Barnootaa  Certifikeetii  Dippiloomaa   
Digirii Jalqabaa  Digrii 2<sup>ffaa</sup>  kan biro

**Kutaa 2<sup>ffaa</sup> :** Iyyaafannoo Dhiibbaa Faalama Induustiriitiin Uummata naannoo Magaalaa Buraayyuu Irratti qabu.

**Qajeelfama:** Himootni armaan gadiidhiibbaa faalamni induustirii uummata jiraattota Magaalaa Buraayyuu irratti qabu qorachuuf kan dhihaatanii dha. Gaaffilleewwan armaan gadiitiif deebii sirrii ta'e akka naaf guuttan abdachaa kabajaan gaafadha.

1. Induustiriin Magaalaa Buraayyuu dhiibbaa inni faalama naannoo irratti qabu ilalchisee hubannoo uummatni qabu akkamitti sadarkeessita ?

- A. Baay'ee olaanaa
- B. Olaanaa
- C. Hin beekamu.
- D. Gadi'aanaa
- E. Baay'ee gadi'aanaa

2. Dhiimoota murteessoo faalama naannoo irratti karoorsuu fi gabaasuu dabalatee mariin uummataa Bulchiinsa Magaalaa Buraayyuu keessatti si'a meeqa gaggeeffama ?

- A. Waggaatti si'a tokko
- B. Waggaatti si'a lama
- C. yeroo sadii
- D. Yeroo afur
- E. Gonkuma hin jiru

3. Uummatni Magaalaa Buraayyuu murtee eegumsa naannoo ilaalchisee murtaa'uu irratti hirmaataa jiraa?

- A. Eeyyee
- B. Lakkii
- C. Hin beeku

D. Kan biroo yoo jiraate, haa ibsamu \_\_\_\_\_

4. Hirmaannaa uummatni qorqnnoo Sakatta'iinsa dhiibbaanaannoo Warshaaleen Magaalaa Buraayyuu keessa jiran ummata irraa fi naannoo irraan ga'an irratti qabu akkamitti ilaalta?

- A. Baay'ee cimaa dha.
- B. Cimaadha
- C. Hin beekamu
- D. Laafaadha dha
- E. Baay'ee laafaa dha.

5. Abbaan Taayitaa Eegumsa Naannoo sadarkaa Bulchiinsa Magaalaatti jiru miidhaa induustiriin magaalicha keessa jiran geessisan ittisuun furmaata kennuu danda'aa ?

- D. Eeyyee
- E. Lakkii
- F. Hin beeku

G. Kan biroo yoo jiraate haa ibsamu \_\_\_\_\_

6. Deebiin kee armaan olii "**Lakkii**" yoo ta'e , sababni isaa haa ibsamu .

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7. Humna raawwachisummaa magaalii Buraayyuu rakkoo faalama industirii furuuf qabu akkamitti hubatu?
- Baay'ee olaanaa
  - Olaanaa
  - Hin beekamu
  - Gadi aanaa
  - Baay'ee gadi aanaa
8. Magaalichi faalama naannoo gama induustiriitiin dhufu danda'u furuuf hangam hojjete ?
- Baay'ee olaanaa
  - Olaanaa
  - Hin beekamu
  - Gadi aanaa
  - Baay'ee gadi aanaa
9. Sadarkaa Mootummaa kamitti rakkoo faalama induustiriin dhufu haala bu'a qabeessa ta'een to'achuun kan danda'amu?
- Magaalaa Buraayyuu
  - Mootummaa Naannoo Oromiyaa
  - Mootummaa Federaalaa
  - Magaalaa fi Naannoo
  - Naannoo fi Fedaraala
  - Magaala , Naannoo fi Federaala
  - Kan biroo yoo jiraate haa ibsamu \_\_\_\_\_
10. Rakkoo faalama industirii Buraayyuu keessaa jiruuf sababootni gurguddoo maalfaadha jettanii yaaddu ?
- \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_

11. Uummata naannaawa “**zoonii Industirii**” Magaalaa Buraayyuu jiraataniif faayidaan industiriin qabu maalfaadha ? isaan kana tarreessituu ?

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12. Faalama induustiriitiin dhiibbaan nama , beeladootaa ykn lubbu qabeeyyii biroo Magaalaa Buraayyuu kessa jiran irratti qaqabe maalfaadha ? Isaan kana tarreessituu?

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13. Rakkoowwan bulchiinsaa iddoo kosiin itti gatamu (maqfamu) waliin walqabatee Magaalicha keessa jiranmaalfaadha ? Isaan kana tarreessituu?

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14. Rakkoowwan faalama induustiriitii waliin walqabatee Magaalaa Buraayyuu keessa jiru kana furuuf maaltu godhamuu qaba jettanii yaaddu?

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15. Rakkoo iddoo kosiin Magaalaa Buraayyuu itti gatamu(maqfamu) waliin walqabatee jiru kana furuuf maal godhamuu qaba jettanii yaadduu?

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16. Rakkoowwan faalama naannawa Magaalaa Buraayyuu keessatti jiru furuuf filannoowwan kan biroo yoo jiraatan yaada kennuu dandeessuu ?

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## F. Environmental Responsibilities passed to city's environmental authority

### ***Aangoo fi gahee hojii Abba Taayitaa Eegumsa Naannoo, Bosonaa fi Jijjarama Qilleensa Burraayyu***

Akkaataa labsii Lakk. 199/2008 keewwata 41 jalatti taa'een aangoo fi gaheen hojii Abba Taayitaa Eegumsa Naannoo, Bosonaa fi Jijjarama Qilleensa Oromiyaa akka armaan gadiitti ka'amee jira.

1. Imaammata fi tarsiimoo eegumsa naannoo fi qabeenya bosonaa qophaa'e hojiirra ni oolcha. hojiirra oolmaa isaa ni hordofa, ni too'ata; raawwii seeraan alaa irratti tarkannfii ni fudhata;
2. Tarsiimoo madaallii sadarkaa naannoo, qabeenya bosonaa fi diinagdee magariisaa dandamannaa jijjiirama haala qilleensaa qophaa'e hojiirra ni oolcha; hojiirra akka oolu ni taasisa; hojiirra oolmaa isaa ni too'ata;
3. Sagantaa ijaarsa diinagdee magariisaa dandamannaa jijjiirama haala qilleensaa hojii irra ni oolcha; hojiirra oolmaa isaa ol'aantummaan ni qindeessa, ni hordofa, deeggarsa tekniikaa ni kenna; gabaasaa raawwii qindaa'aa mootummaaf ni dhiyeessa;
4. Sekteroota sagantaa ijaarsa diinagdee magariisaa dandamannaa jijjiirama haala qilleensaa hojii irra oolchaniif deeggarsa tekniikaa ni kenna, ni hordofa. raawwii isaani akka madaalamu haala ni mijeessa;
5. Bosona mootummaa, hawaasaa fi dhuunfaa akka babal'atu deeggarsa ogummaa ni kenna; ni hordofa. ni too'ata, ni jajjabeessa;
6. Iddoon ikoo-turizimii akka hundeeffamuu fi babal'atu ni taasisa; hambaawwan seenaa qabeenya uumamaa waliin walqabatan qaama dhimmi ilaallatu waliin akka eeggamu ni taasisa;
7. Hojiiwwaan misooma bosonaa bal'inaan gaggeeffamu irraa hawaasni daldala bosonaa (carbon trade) irraa fayyadamaa akka ta'u deeggarsa tekniikaa ni kenna; ni qindeessa, ni hordofa;
8. Umanni naannoo bosonaa, paarkii fi dawoo bineensa bosonaa jiraatu sochii eegumsa naannoo fi misooma bosonaa irratti akka hirmaatu, akkasumas bu'aa argamu irraa akka fayyadamu ni hojjata;
9. Qaama naannoo fi qabeenya bosonaa irratti miidhaa geessise kamiyyuu irratti tarkaanfii seeraa ni fudhata; akka fudhatamu ni taasisa;
10. Sagantaa misooma bosonaa qophaa'ee- hojii irra ni oolcha; misoomni fi eegumsi qabeenya bosonaa qindaa'aa akka gaggeeffamu haala ni mijeessa; ni qindeessa; bosona mootummaa, hawaasaa fi dhuunfaa akka baballatu deeggarsa ogummaa ni kenna; ni hordofa; hubannoon hawaasaa akka cimuu ni taasisa;
11. Laaboraatoorri fi wirtuuwwan too'annoo qulqullina sanyii biqiltuu bosonaa keessatti gaggeeffamu ni hundeesa; ni bulcha; qo'anoowwaan misooma fi eegumsa bosonaa babal'isuuf gargaaran ni gaggeessa; akka gaggeeffamu ni taasisa; hojiirra ni oolcha; hojiirra akka oolu ni taasisa; (sadr. Oromia tti)

12. Eegumsa naannoo fi qabeenya bosonaa ilaalchisee waldiddaa uumamu qaama dhimmi ilaalu waliin furmaata akka argatu ni taasisa; ni hordofa;
13. Qaamolee qabeenya uumamaa seera ala itti fayyadamuun naannoo irratti dhiibbaa geessisan deebisanii akka misoomsan ni taasisa; tarkaanfii seera ni fudhata; akka fudhatamu ni taasisa;
14. Pirojektoonni misoomaa kamiyyuu yammuu karoofaman sakatta'iinsi dhiibbaa naannoo durfamee akka gaggeeffamu ni taasisa; ulaagaalee sakata'iinsa dhiibbaa naannoo qopha'aa raawwatamu isaa ni hordofa; hojiiwwan misooma adda addaa gaggeeffaman kamiyyuu naannoo irratti dhiibbaa akka hin dhaqqabsiifne ni too'ata;
15. Dhaabbileen tajaajila adda addaa kennan yookiin industiriiwwan oomishaa magaalaa keessa jiran dirqamoota seerota eegumsa naannoo, misooma fi eegumsa bosonaa ilaalchisee bahan kabajuu isaanii ni mirkaneessa; mooraa dhaabbata kamiyyuu seemuun samuda ni fudhata; ni qorata; tarkaanfii sirreeffamaa ni fudhata; akka fudhatamu ni taasisa;
16. Balfaawwan dhangala'oo fi goggogaa yookiin hafteewwan oomisha warshaalee fi hazbaan magaalaa keessa bahu sirna madaallii ikooloojii akka hinxureessine ni too'ata; oditti naannoo ni gaggeessa; tarkaanfii sirreeffamaa ni fudhata; akka fudhatamu ni taasisa;
17. Sirna ragaalee fi odeeffannoo eegumsa naannoo, jijjiirama haala qilleensaa fi bosonaa ittiin walitti qabamuuf qophaa'e hojiirra ni oolcha; ragaalee fi odeeffannoo walitti ni qaba, ni gurmeessa; ni kuusa, ni bulcha, akka barbaachisummaa isaatti qaama dhimmi ilaaluuf ni kenna;
18. Eegumsa naannoo, bosonaa fi jijjiirama haala qilleensaa irratti qaamolee adda addaa waliin qindoominaan ni hojjata;
19. Iddoon jireenya lubbu qabeeyyii adda addaa miidhamee lubbu qabeeyyii irratti miidhaa akka hin dhaqqabsiifne ni too'ata; haqinna uumamu irratti tarkaanfii ni fudhata; akka fudhatamu ni taasisa;
20. Heddumina lubbu qabeeyyii (Biodiversity) faayidaa ummataa fi biyyaaf itti fufinsaan hojiirra akka oolu ni misoomsa, ni kunuunsa, ni eega ni too'ata;
21. Manca'ina qabeenya uumamaa fi sochii bu'aa bosonaa fi bineensota bosonaa ni too'ata; tarkaanfii seeraa ni fudhata; akka fudhatamu ni taasisa;
22. Hojiiwwan misooma bosonaa fi bineensa bosonaa dhaabbata bosonaa fi bineensa bosonaatiin gaggeeffaman karoora naannoo akka qabaatan ni taasisa; ni too'ata; hojiirra oolmaa isaa ni hordofa;
23. Misooma magariisaa magaalaa fi parkiiwwan sadarkaa magaalatti gaggeeffaman ilaalchisee deeggarsa teknikaa ni kenna; ni hordofa;

24. Qaamolee misooma bosonaa, daldalaa fi naannessa bu'aa bosonaa, bineensa bosonaa, adamoo fi horsiisa bineensa bosonaa irratti bobba'anif hayyama ogummaa ni kenna; qaama dhimma ilaalu waliin ni hojjata; (sad. oromiatti)
25. Tooftaalee itti fayyadama qabeenya uumamaa itti fufiinsa hingabne, manca'ina yookiin faalama naannoo ittisuu danda'an irratti yaada ni dhiyeessa; hojii irra ni oolcha; hojiirra oolmaa isaa ni hordofa;
26. Giddugaleessa callaa guddistuu bosonaa keessumaayyuu kan sanyii mukaa gosa adda addaa akka hundeeffamu haala ni mijeessa; ni bulcha; ni hordofa;
27. Haala qabiinsa fi itti fayyadama naannoo fi bosonaa haqa qabeessa ta'e mirkaneessuu fi carraa hojii diinagdee magariisaa uumuu danda'u irratti qorannoo fi ee'uumsa tekinolojii ni qindeessa;
28. Daladala seeran alaa callaa guddistuu misooma bosonaa fi bu'aa bosonaa waliin walqabatu akka hingaggeeffamne ni too'ata; akkaataa seeraatiin qaama dhimmi ilaalu waliin tarkaanfii seeraa ni fudhata;
29. Sirna misoomni bosona dhuunfaa, waliinii fi misooma sululaa lafa qonnaatiin ala jiru ittiin misoomuu fi faayidaa irra oolu diriirsame hojiirra ni oolcha; raawwii isaa ni hordofa;
30. Sagantaa barnoota eegumsa naannoo idileen alaa ni babal'isa; dhimmoonni eegumsa naannoo sirna barnoota idilee keessatti akka hammataman qaama dhimmi ilaallatu waliin ni hojjata;
31. Pirokektoota misooma fi kunuunsa qabeenya bosonaa waliin walqabatan raawwii isaani ni hordofa; ni hooggana;
32. Sirna bosona uumamaa naannichaa itti eeggamu fi akkaataa barbaachisummaa isaatti faayidaa irra oolu ni diriirsa; hojii irra oolmaa isaa ni mirkaneessa; (sad. Oromia tti)
33. Diinagdee magariisaa dandamannaa jijjiirama haala qilleensaa magaalichaa akkasumas eegumsa naannoo fi bosonaa irratti gabaasa waytaawaa ta'e qopheessuun ni tamsaasa.

LAKKI G/54/07/100

Guraha 20/06/06

Ganda L/ Kattawatti  
Bul. Mag. Buraayyatti  
Ganda L/ Kattawatti

Dhimmi :- Iyyata Ummataa Muannoo Masjidow  
iloota

Ummanni muannoo masjidow dhiibbaa warsha  
"fu baatii" irratti gohe iloota chisee iyyata  
Guyyaa 19/06/06 barreessee furmaata gofuteera.  
Nutis dhimma isaa iloollee farraxoon isooni sirrii  
fa'uu miykaneessinu illee farraxan fii fudhachuu  
angoo keenyaa ol muon fa'eeff halleen isaa  
jama keessaniin iloolamee farraxan fii orkka  
fudhachuu jama keessaniin dhiheessu  
keenya kabajoon ni beeksina"



Wajaa Wajjoo  
Wajjoo  
Tossona Wajjoo

Guyyaa 19/06/06

Buichiinsa ganda jalluu kattaatti Goxii Suphee  
yftaa fuy

kattaa

Phimma:- Hojii faalama Naannoo Mana  
jireenyaa uummatoo akka nuffaa  
dhaabbatu raafachuu itaate

Goxii keeya naannoo "masgiida" jedhamu beekamu  
keessatti iddoo uummanni hedduu jiraatu keessatti  
Obbo Binigamkan jedhamu warsha qisoatti  
banuu dhaan fooliin isaa fi keemi koallii  
achi keessaa balu faayyaa jiraattota haanicha  
jirru irratti dhiibboe gudaan fidaa jira.  
Kula kana ilaalchisee guyyaa 25/10/05 "yyata  
dhiheessinaan gandama beeksi fu illee hanga  
ammaa furmaata dhiibneerra. sababa kanaas  
Ijoollee fi dubartoonni balaa dhiibbee "soqinadii"  
tiif saaxilamanii jiru. fooliin isaa sochiin  
keeya irratti dhiibboe fidee jira. kanaafuu  
Goxiin kun hoola kana kusaatee qaanni  
kun akka itaqofataman fi hojii dhiibboe  
nurratti fidaa jiru kana akka nurraa  
dhaabu, 400 dadhabe qaama aangoo  
qabu o'amaatti kabarsee furmaani  
fokko akka aarf kennamu kabajoon  
raafachaa wti cyyallooni rogaan  
keeya akkaataa armaan gadiitti  
cysameen cyyanneeta.



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Ան՝ ունի: հոյ փ Լոյ Տիտուս ույ՛ Դիտուս

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