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The Assessment of Indigenous Land Rehabilitation Practice in Kura Kebele, Lokka Abaya Woreda, Sidama, Ethiopia.

A Research Paper Submitted to Department of Geography and Environmental Studies for Partial Fulfillment the Requirement for the Bachelor of Art Degree in Geography and Environmental Studies

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DECLARETION

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This is to clarify the Senior Essay Prepared by Petros alemayehu, Seyoum Jomole, and Megersa Mohamednur entitled "The Assessment of Indigenous Land Rehabilitation practice in kura Kebele the case of Lokka Abaya Woreda", Sidama regional state,Ethiopia which is submitted on partial fulfillment of the requirement for the Bachelor of Art Degree in Geography and Environmental Studies.

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ACRONYMS

UNDP United Nations Development program

NRCS Natural Resource Conservation Service

GDP Gross Domestic Product

MoF Ministry of forestry

MoW Ministry of Welfare

ABSTRACT

Land degradation has its effect on social, economic and political life of the population. Land degradation is the major challenges to agricultural development and food security of the country. This study was undertaken in Lokka Abaya woreda in case of Kura kebele. In order to achieve the objective of the study related with assessment of Indigenous land rehabilitation practice, both primary and secondary data were generated by employing qualitative and quantative data. Simple random sampling technique was used to select the targeted population, 83 household heads were selected from the kebele. The process of analysis of the study was carried out using qualitative description and quantitative analysis. The quantitative data was analyzed using frequency, percentage and mean when appropriate. The qualitative data was collected through interview and questionnaire. From the finding of Researchers concluded that awareness creation and continuous training, resettlement program. creating opportunities for alternative means of livelihood and promoting NGOs effort to involve in indigenous land rehabilitation practices could solve the problem facing land rehabilitation practices in the study area.

Key words: Land rehabilitation, Land degradation

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the study

Land is the most important natural resource all over the world. It is a place from which human beings are exploiting a number of resources. Almost all food production for the world population is derived from land, and the need to produce more is increasing from time to time due to an increase in population. For increasing production, either area under cultivation must be expanded or its productivity needs to be increased (*Jorn Laxon, 2011*).

Fertility of land is decisive factor in addition to other technological inputs. However, land is losing its productivity due to a rising trend of land degradation. Land resources degradation, resulting from different causes, that are rapid population growth, deforestation, low vegetation cover, unbalanced crop and livestock production is threatening long term productivity. Now days, land degradation is reducing yield significantly and it is more acute in some parts of the world than the others (*Prokop, P. and Poreba.G.J., 2012*).

In our country Ethiopia, land degradation has become a serious problem affecting the social, economic and political life of the population. It is one of the major challenges to agricultural development and food security of the country. The rate of the country's land degradation is very high. A large portion of the agricultural land which is mainly located in the high land part of the country is affected by severe to moderate land degradation (*Newton,A.C.(2007).*

According to other worlds, like many other developing countries, Ethiopia is characterized by agrarian economy and about 75% of its total population based on agricultural activities. Moreover, the role of agriculture in the overall economy is quite significant. It contributes 40% of the total GDP and 80% of foreign exchange

earnings. Thus, land productivity is one of the key elements for enhancing economic development of the country (*Hurni, H, 2016*).

Land rehabilitation is an intervention designed to make a geo-ecological improvement. In most contexts, this involves the mitigation or reversal of land degradation caused by poor land husbandry practices, especially agricultural practices. The key issues in land rehabilitation concern to what degree the land should be rehabilitated to self – sustaining natural control and to what degree to a sustainable economic after- use, where future land quality is sustained by careful management(NRCS, 2007).

In many contexts land rehabilitation works involve countering the physical symptoms of land degradation, which include losses of soil quality due to soil or sub soil compaction, and also accelerated run off and erosion on hill slopes and in water courses, Rehabilitation treatments divide between those treat the problems in the soil, usually by changes in land management, and those that treat the consequences of soil degradation, usually by engineering (NRCS, 2010).

In every case, since the fundamental causes of the land degradation are the social and economic processes that derive human societies to abuse the land, the long term success of any land rehabilitation intervention depends up on the changes in land management (*Mow, 2003*).

Traditional knowledge contribution to conservation and management is increasingly recognized, and implementation endeavors are underway in several countries (*Dejene 2003*).

Ethiopia for the last couple of decades has faced serious ecological imbalances because of large scale deforestation and soil erosion caused by improper farming practices, destructive forest exploitation, wildfire and uncontrolled grazing practices. This has resulted in a declining agricultural production, water depletion, disturbed hydrological condition, and poverty and food insecurity, over the past three decades,

many governmental and non-governmental organizations have been involved in massive soil and water conservation activities. However, the results achieved in reducing soil erosion problem and improving agricultural productivity has been Unsatisfactory *(Daniel 2002*).

1.2. Statement of the problem

In Ethiopia high dependency of the people's livelihoods on agriculture and inappropriate use of natural resources resulted in fast and vast land degradation *(Olsson and Schaepman, M.2013).* On the other hand, development of agricultural sector depends on land productivity. However, without the proper management of land resources, it becomes very challenging for Ethiopia to feed the increasing population. As a result, there should be appropriate land management system to improve the productivity.

To solve the problems of land degradation in the country, many efforts have been made since 1970s. Among the reasons behind the failure were: the top- down nature of the conservation approach itself, improper planning, inadequate resources allocation, recurrent drought, labor intensive nature of the technologies, little short term returns or benefits gained from the programs, little systematic efforts made to incorporate indigenous conservation practices, political constraints and not gives attention for traditional knowledge to rehabilitating degraded land *(Akililu ,A, 2012).*

Land is the most crucial and precious natural resources that is important to maintain and sustain social welfare. Land as a factor of production is immense importance. As already have been pointed out, everything that we can be use traced ultimately from the land. The main reason selection of this site is that the area is highly facing land degradation problem. A farmers follows Indigenous land rehabilitation practice, but it is poor.However community in Kura Kebele lack of access to safe and inadequate use of land because lack of awareness. To fill these gap researchers need to create awareness through Continuous training to the community to solve that factor affecting the Indigenous land rehabilitation practice.

1.3. Objectives of the study

1.3.1. General objectives

The general objective of this study was to Assess Indigenous land rehabilitation practice in Kura kebele Lokka Abaya Woreda.

1.3.2. Specific objectives

- To identify the social, economic and institutional factor that determines the indigenous land rehabilitation practice in study area.
- To examine the major challenge of the indigenous land rehabilitation practice in the study area.
- To identify measures that should be taken to indigenously rehabilitate degraded lands and productivity in the study area.

1.4. Research questions

1, what are the main socio economic and institutional factors that affect the indigenous land rehabilitation practice in the study area?

2, what are major challenges of indigenous land rehabilitation practice in Kura kebele?

3, what effective measure should be taken to indigenously rehabilitate degraded lands and improve their productivity?

1.5 .significance of the study

The study will be important in providing information to concerned bodies in relation to factor affecting the practice of land rehabilitation in the study area. It will be also help to alleviate problems that affecting the practice of land rehabilitation and productivity in the study area. To promote or increase productivity in the kebele.To develop awareness of the people towards indigenous land rehabilitation practice.it helps the people who practices indigenous land rehabilitation.it serves as reference material for people who wish to conduct a further study on the issue and related areas.

1.6. Scope of the study

The study was conducted in Lokka Abaya woreda of kura kebele. The study confined to this kebele due to severe problem of the land degradation and delimited to identify factors affecting of Indigenous land rehabilitation practice.

1.7. Limitation of the study

The researcher has faced some problem in this study. The problem has related with language barrier, shortage of time and necessary materials. Unwillingness of the respondents to express their knowing to explore much about the research and lack of finance and of written documents about the area for better information**.**

1.8. Organization of the study

The research paper contains five chapters. The first is an introduction that covers the background of the study, statement of the problem, objectives, research questions, scope, limitation, organization of the study. In the second chapter related literature are reviewed in order to get information about the study. The third chapter deals with the methodology and description of the study area while the fourth chapter analysis and interpretation of the study. Finally the fifth chapter highlights conclusion and recommendation.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Concepts of important indigenous terms

Land rehabilitation: land rehabilitation is a process of reforming the land in a given area to some degree of its former self, after some process (business, industry, natural disaster, etc.) has damaged it. It is are engineering process that attempts to restore an area of land back to its natural state conserve forest, soil and water resources and knowledge that they acquire through both traditional and modern environmental education that could from Agricultural experts. It also indicates the activities carried out by other actors the rehabilitate degraded areas *(UNDP, 2009*).

Land rehabilitation practice: in the context of this study refers to practices that people in the study area traditionally conserve forest, soil and water resources and/ knowledge that they acquire through modern environmental education that could be from agricultural experts. It also indicates the activities cared out by other actors the rehabilitate degraded areas *(MoF, 2003).*

Conservation: the term is applied in general to the positive work of maintenance, enhancement and wise management or reducing the rate of consumption to avoid irrevocable depletion, ignored to benefit posterity as in the conservation nature or of natural resources (the forest, soil, wild life, biodiversity, and environment) or of building work of art of special merit, etc(*Agus,F.2011*). Specially, it is applied in this study to the conservation activities like protecting from destructive influence, maintenance, enhancement and wise management or reducing the rate of annual depletion of the forest and soil resources in a given area.

Land tenure: land tenure is the relationship, whether legally or customarily defined between people, as individuals or groups with respect to land (Oxfam, 2016).

Land degradation: land degradation is a reduction of resources potential by one or a combination of processes including water erosion, wind erosion, a long term reduction in the amount or diversity of natural vegetation, Stalinization, or solidification acting on the land. Almost all countries, rich, poor; arid or humid; cool or tropical experiences some forms of land degradation, but the rate significantly varies among different countries based on variation in their biophysical, social and economic structure (*Chicana, B and B.N.kigomo, 2003*). For this study, land degradation is loss of soil fertility or substantial decreasing of land productivity and soil erosion, deforestation and degradation of grazing lands. Land tenure is also critical for the emergence of viable local level collective land management structures.

2.2 Causes of Land Degradation in Ethiopia

The major causes of land degradation in Ethiopia are rapid population growth, severe soil tloss,deforestation,low vegetation cover, unbalanced crop and livestock production(*Girma,2001*).As *Gete(2000*) also reported that human population is increasing at frighteningly highrate and the productive capacity of soil resource neccessary to sustain that population is steadily decreasing because of land degradation.dense population and inappropriate farming practice combined with intensive rain and rugged topography intensified land degradation problem in the country.the high population growth made steep fragile areas to be included in cultivation,thus accerelating rate of soil erosion*(Betru,2003*).

2.3. Impacts of land degradation

Land degradation manifests itself in many different ways: vegetation becomes increasingly scarce, water courses dry up, thorny weeds predominate in once rich pastures, footpaths grow into gullies, and soils become thin and stony. All of these manifestations have potentially severe impacts on the environment, for land users and for people who rely for their living on the products from a healthy landscape (*Berry 2003).*

2.4. Land Rehabilitation Practice in Ethiopia

Traditionally through time, farmers have developed different soil conservation and land management practices of their own. With those practices, the farmers are able to sustain their production for centuries. Until now, those technologies are playing a significant practice in the production of subsistence agriculture. Among the traditional land management techniques that have been practice by Ethiopian farmers, the major ones include: plough, fallowing, crop rotation, and farm yard manure and agro forestry. Large scale efforts for implementing natural recourses conservation and development programs had taken place to reverse the problem of land degradation in Ethiopia starting from 1970s. The programs mainly focused on soil and water conservation and rehabilitation of degraded lands through building physical structures and a forestation measures (*Alemneh D, 2003*).

2.5. Determinant Factors to Land Rehabilitation Practices

2.5.1 Physical factors

Topography and climate have direct and indirect impacts on land management practice. The type and intensity of the management practice to be implemented at a given farmland depend on the nature of the climate and topography where the farm land is located (*Girmay 2008*)

2.5.2. Economic factors

Farmers will adopt soil conservation practices if they have necessary labor, capital and technological inputs to do so and if they perceive an immediate economic benefit (*Abas Id, A., Soelaeman, 2003*).

Individuals with few current incomes and inability to obtain capital for conservation investments may not be willing or able to forgo income to maximize expected not returns over a long period. Similarly, individuals in uncertain economic situations will

be inclined to use short planning horizons because they are unable to predict future costs and prices (*Harbagung, 2010*).

2.5.3. Socio- cultural factors

Many peoples in developing countries barely carry out a living from their land by hard work such as a hard tillage. They know that traditional management has kept them and their predecessors alive, and that they have nothing to spare for gambling on a new method. It is difficult for them to change their techniques even for immediate benefits such as higher yields and less soil loss. It is still more difficult for them to adopt practices that require an investment, especially if the benefits are delayed or disturbed over several years. The establishment of conservation practices under such conditions requires reliable guarantee that those people will not starve to death if the new practice fails (*Mesfin Legeso, 2012*).

2.5.4. Institutional factors

Appropriate policy environment is the pre request for being able to implement natural resource management process that satisfies the objectives specified by the interested profits. Government policies are not translated into action unless there is political will to make them work. Therefore, the situation in many countries to day is that plans are made for the conservation of natural resources but they have little practical effect. Whatever the historical background, many developing countries have sizable portion of land that is previously reserved. As the authoritarian management has decline, population pressure and land Scarcity have increased. So has the chance of evading punishment for illegal encroachment on reserved land. The restriction of land is often to preserve the income or power of the ruling elites; there are also many examples where the land is deliberately withheld from settlement because it is ecologically unsuitable *(Kumar, S, G and Renin, G, 2006).*

2.6. Conceptual Frame Work

There are different factors that could affect land rehabilitation practice. Those factors are interlinked with one another and operating at different scales. Among those factor, some have direct influence on land rehabilitation practices where as other have indirect influence. It indicates that land rehabilitation practices are affected socio-cultural, economic and and institutional factors.

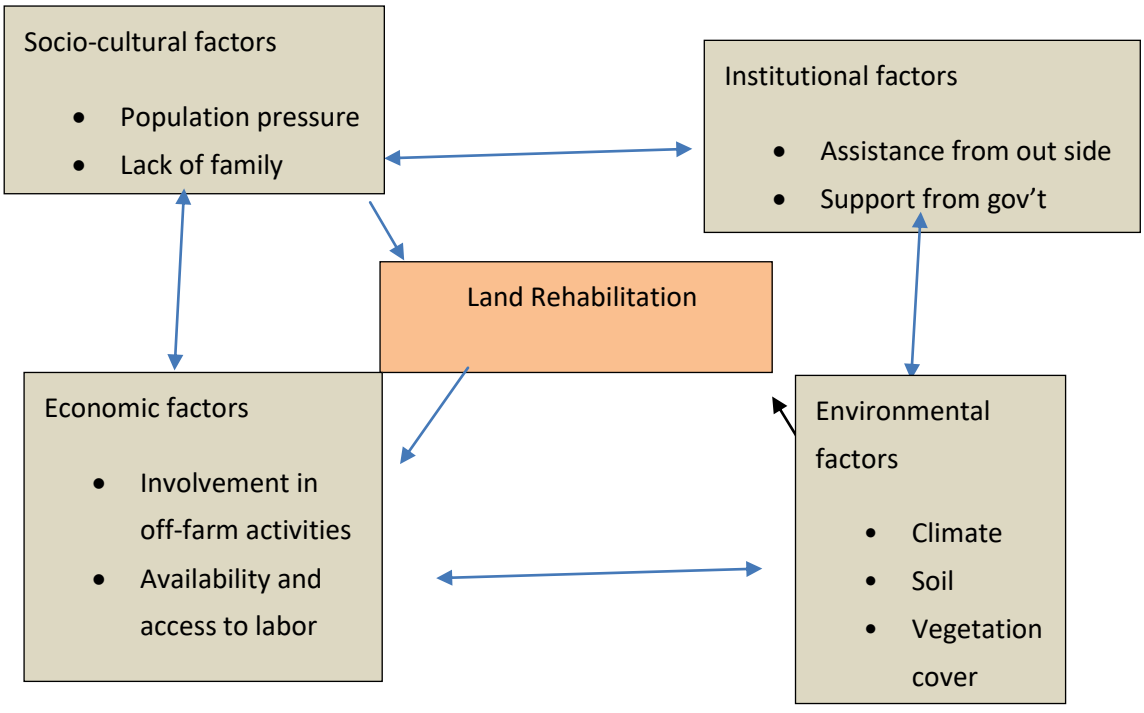

Figure 1 Conceptual frame work

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Description of the study area

3.1.1 Location

According to the Lokka Abaya woreda Municipality office of Kura kebele, it is far from 13 km from lokka abaya woreda and its relative location is the South part of Dase, in the north direction Kege, in the west direction Masina and the east direction Hidda kebele. Its absolute location of latitude and longitude of Kura Keble is 6º, 46’’N and 38º, 33”E respectively.

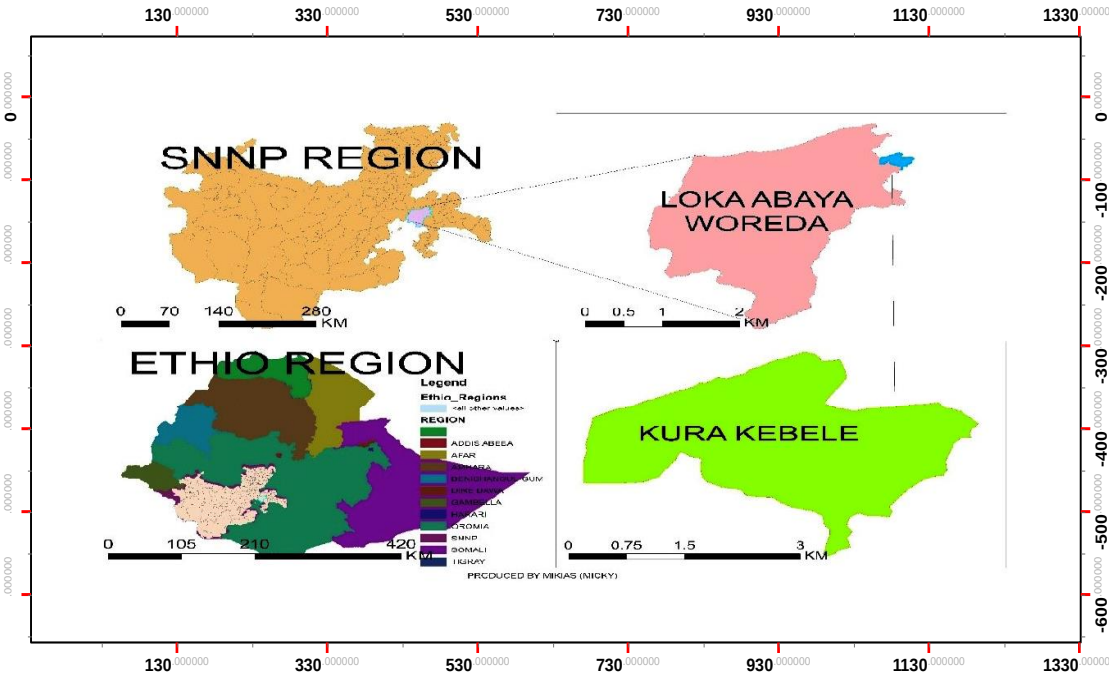

Figure2. Study area map (Geography department GIS Lab 2023).

3.1.2. Climate condition of study area

The climate of Kura kebele is Woina Dega and Semi-arid. The average temperature is 25º-27º and average annual rain fall amount ranges between 900-1100 millimeters. The seasonal rain fall pattern that extends from the first rain period march-june and the second rain season July-October. The coldest and warmest months are December to march.

3.1.3. Target population

According to Lokka Abaya Woreda Agricultural Office report the total population of the study area is 3000 from this total population there are male 1477 and 1523 female(census 2007).

3.1.4. Topography

The topographic feature of Kura kebele is plain and other parts ups and down feature, lies the latitude 1700-1800m mean sea level (*Lokka Abaya woreda agricultural office, 2022).*

3.1.5. Soil type

The soils of the study area are clay, loam, and sand soils are available, but the loam soils are the most common soil in the study area. The farmers are not able to protect the soils from erosion. Therefore, the fertility of the soil is gradually decreased from time to time According to (*Agricultural Office of the kebele2022*), there are different types agricultural products such as coffee, maize, teff, chat and inset.

3.1.6. Economic activities

The population Kura Kebele is mostly engaged in agricultures and cattle rearing. Cattle breading are supporting livelihood activity of the society to their practice of land rehabilitation. Due to the focus of cattle breeder on quantity and absence of enough grazing land the quality of cattle is low (*Lokka Abaya Woreda Agricultural Office, 2022).*

3.2. Research Methodology

3.2.1. Research designs

The research design was descriptive type. Descriptive research can utilize elements of both qualitative and quantitative research methodologies. These methods enable to describe the clearly indigenous land Rehabilitation practice and factor affecting land indigenous rehabilitation practice of study area.

3.2.2. Types of data and sources of data

The data sources of the study were primary and secondary data sources. Primary data was gathered through, interview, observation and questionnaires**.**

Secondary data source was collect from annual report, documents of Kebele office and books, published and unpublished sources like journals, documents, and magazines and other website information and text book.

3.2.3. Sampling techniques

In this study simple random sampling, Techniques were used select appropriate sample size from the population which is assessing practice of indigenous land rehabilitation in Kura kebele. So, Simple Random sampling is the simplest type of random sampling and it is the most basic probability sampling techniques in which every individual's unit (numbers) of the population has an equal probability of being included in the sample.

3.2.4 .Sample size Determination

The study area population is about 3000 and there are 480 household heads from them male 470 and female 10 those are household heads, we have select 83 household heads by using lottery method to reduce time and money of the Researchers. The samples were selected by using the following sample determination formula (*Yamane 1967).*

$n = N/1+N(e^2)$ Where; n= Sample size

N= Total household population

E = error margin by percent (10%)

$N= 480/1+480(0.1^2)$

$= 480/1+4.8$

$= 480/5.8$

= 83 respondents

Therefore the Sample size of the study was 83.

3.3 Data Collection Instrument (tools)

3.3.1. Observation

Direct field observation was encompasses visit of cultivated and uncultivated land, topography, vegetation cover, settlement pattern and the over all aspects of practice of land rehabilitation of the study area. Thus, the opinions-based researchers visit of the study area was included in the study.

3.3.2. Questionnaires

Researchers used both open ended and close ended questionnaire to obtained information from selected samples of 83 households from the Kebele. Using this method, household demographic characteristics, household socio-economic characteristics, and issues related to land degradation, land rehabilitation practices and the existing challenges to rehabilitate degraded lands and measures to be taken to improve practice of land rehabilitation were obtained.

3.3.3. Interview

A key informant interview is particularly important in getting information pertinent to practice of land rehabilitation. Through information regarding the experts from Woreda agriculture and rural development office and community elders of the Kebele were interviewed.

3.3.4. Ethical consideration

The Researchers have certain ethical standard consideration suggested by (*kvale, 2009*). These include informing the participants about the purpose of research, voluntary participation, confidentiality, avoiding dependent relation and etc. The researchers would conduct after getting full willingness and consent from the participants, participation in interview voluntarily.

3.4. Methods of data analysis

Researchers analyzed primary and secondary data by using qualitative and quantitative methods. The qualitative data was analyzed verbally, while quantitative data was analyzed by using simple statistical methods, such as table, percentages and Frequency distribution.

CHAPTER FOUR

4. DATA ANALYSIS AND INTERPRETATION

The main concern of this chapter is to analyze and interpret data in order to identify factors affecting the practice of land rehabilitation and productivity.

4.1. Background of the respondents

4. 1.1. Sex of the respondents

Sex structure is one of demographic factors which affect social, economic, and political aspect. As a result this study identified the sex structure of respondents as follows.

Table 4.1.Sex of the respondents

Sex	Number of respondents	percentage
Male	60	72.28%
Female	23	27.72%
Total	83	100

Source: field survey, 2023

As the table 4.1shows the male proportion is greater than female proportion which covers 72.28% and 27.72% respectively.

4.1.2. Age of the respondents

Age structure is an important democratic character of respondent which influence the participation of respondent to solve problems affecting the practice of land rehabilitation and productivity

Table 4.2. Age of the respondents

Age group	Number of respondents	Percentage
18-28	10	12.04%

29-38	12	14.45%
39-48	26	31.32%
Above 49	35	42.16%
Total	83	100%

Source: field survey; 2023

As the above table 4.2 shows more respondents are under the age of 18-28 which covers 12.04% and high age group above 49 covers 42.16%, so we concluded that most of the respondent's participation ages above 49 are more productive.

4.1.3. Marital status of the respondents

Marital status is one of demographic factor of respondents which influence factor affecting the practice of land rehabilitation and productivity on different activities.

Table 4.3.Marital status of the respondents

Marital status	**Frequency**	**Percentage**
Married	70	84.33%
Single	5	6.02%
Divorce	8	9.65%
Widowed	-	-
Total	83	100%

Source: field survey, 2023

As the above table 4.3 shows that the respondents are at different marital status group like married which covers 84.33%, single covers 6.02%, divorced which covers 9.65% and widowed was almost nonexistent. So we concluded that most of the respondents were married.

4.1.4. Educational status of respondents

Educational status is factor which influences proper utilization of land rehabilitation practices as well as other natural resources as a country has greater educated people, it plays greater role for its resource conservation, putting alternative to the existed problem as well as rehabilitation the degraded resource

Table 4.4. Educational level of respondents

Number	Education level	Frequency	Percentage
1	Illitrate	14	16.86%
2	1-4	54	65%
3	5-8	8	9.63%
4	9-10	7	8.43%
	Total	83	100%

Source: field survey, 2023

Education has an impact on farmer's perception towards land rehabilitation and productivity. If farmers are educated they have better understanding and experience in rehabilitation of degraded lands from different agent and they can manage and maintain their land properly. As the educational level of the farmer increase undertaking land rehabilitation measure also increase. From the above table 4.4, 65% of the respondents 1-4 educated level and 16.86% of respondents were illitrate.

4.1.5. Occupational status the respondents

Occupation plays a major role to solve factor affecting the practice of land rehabilitation of ascertain region mean each individual has a responsibility to participate to solve the problem according to the ability and experience.

Table 4.5. Occupational status of respondent

Occupational Status	Frequency	percentage
Daily Labor	6	7.3%
Farmer	75	90.36%
Civil Servant	-	-
Merchant	2	2.42%
Total	83	100%

Source: field survey, 2023

As the above tables 4.5 Shows 90.36 % of the respondents are farmers and the lowest respondents that accounts about 2.42%.This shows that the study area is dominated by farmers.

4.2. Indigenous land rehabilitation practices in the study area

Under land rehabilitation practice factors in the study area faced different factors.

Table4.6. Land rehabilitation practice factors

Item	Alternative	Frequency	Percentage

Are there any factors affect Indigenous land rehabilitation practices in your area?	YES	75	90,36%
	No	8	9.64%
	Total	83	100%

Source: field survey, 2023

As the above table 4.6 Shows the respondents affected by different factors in land rehabilitation practices. 90.36% of the respondents are more affected. The rest of 9.64% of the respondents are not affected. This implies most of the society in the study area is participate on land rehabilitation practices. In this case the respondents are affected by different factors.

4.3. Factors affecting indigenous land rehabilitation practices

There are different factors that could affect land rehabilitation practices, such as economic, institutional and social factors from the response of respondents.

4.7 Factor affecting land rehabilitation practices

Factor	Frequency	Percentage (%)
Economic	35	42.16%
Institutional	8	9.65%
Social	40	48.19%
Total	83	100%

Source: field survey, 2023

the above table, 4.7 Shows there are different factors affecting land rehabilitation practices among this 42.16% of the respondents are affected by Economic factors. The remaining 48.19 %and 9.65% of the respondents are affected by social factor and institutional respectively. From this concluded that, the society are most affected by social factors for indigenous land rehabilitation practices in the study area.

4.4. Major economic factors that determine the practice of indigenous land rehabilitation in the study area

The major economic factors that determine the practice of land rehabilitation in the study area is income, employment in responses of respondents.

Table 4.6. Major economic factors that determine the practice of indigenous land rehabilitation.

Item	Alternative	Frequency	Percentage
Major Economic factor	Employment	48	57.83%
	Income	35	42.17%
	Total	83	100

Source: field survey, 2023

From the above table 4.8 shows as most of the respondents respond (57.83%) of the respondents are employment is the factors that determine the practice of land rehabilitation in the studying area. The rest of income 42.17% is factors on land rehabilitation practices in the study area respectively.

4.5. Institutional factors that determine the practice of indigenous land rehabilitation in the study area

Government policies are not translated into action unless there the political to make them work. Some of them factors such as,assistance from outside, access to extension service and access to supporting efforts of government from the response of respondents.

Table 4.7. Institutional factors that determine the practice of land rehabilitation

Item	Aternative	Frequency	Percentage

Major istitutional factors	Assistance from outside	30	36.15%
	Access to extension service	43	51.80%
	Support indigenous land rehabilitation practice by gov't	10	12.0.5%
	Total	83	100

Source: field survey, 2023

As indicated the above table 4.9 shows 51.80% of the respondents have access to extension service is more institutional factors that determine the practice of land rehabilitation.

4.6. Socio- cultural factors that determines the practice of indigenous land rehabilitation in the study area

In the past, there was enough land for everyone and increase in time population just means to bring land in to use. Such as, population pressure, farmers to involve and participation to youth from the response of respondents.

Table 4.8. Socio- cultural factors that determine the practice of Indigenous land rehabilitation.

Item	**Alternative**	**Frequency**	**Percentage**

major socio-cultural factors	Population pressure	15	18.07%
	Farmer involve	60	72.28%
	Participation of youth	8	9.63%
	Total	83	100%

Source: field survey, 2023

From the above table 4.10,shows 72.28 % of the respondents has farmers to involve is the major socio cultural factor for indigenous land rehabilitation practices , 18.07%and 9.63% population pressure and participation of youth respectively are the rest of socio cultural factors in the study area.

4.7. Land rehabilitation practices

It indicates the activities cared out rehabilitate degraded areas show, increasing, decreasing or no change.

Table, 4.9. Land rehabilitation practice

Item	**Alternative**	**Frequency**	**Percentage**
How do you see land rehabilitation practice in your area?	Increasing	50	60.24%
	Decreasing	20	24.09%
	No change	8	9.63%
	Un known	5	6.04%
	Total	83	100%

Source: field survey 2023

4.8. Major challenges for indigenous land rehabilitation practices

According to the respondents the major challenges for rehabilitation of degraded lands in the study area is the community not actively participate on land rehabilitation practices by lack of awareness to community, economically active force to migrate outside the country. In the study area maize crop production is the major activity by which life mainly depends up on. Types of crops grown are among the factors that affect land degradation. This is because types of crops grown affects the level of tillage, soil nutrient up take or restoration and hence can aggravate or minimize degradation. Among these constraints, according to the survey result, soil erosion, erratic rainfall and less access to inputs are the major ones. Significant number of the respondents mentioned drought, pest and diseases and labor shortage as a main constraint to land rehabilitation.

4.9. Measures of indigenous land rehabilitation practices in the study area

Table, 4.10. Measure of land rehabilitation practice in the study area

Item	Alternative	Frequency	Percentage
measures of land rehabilitation practice in your area	Soil and water conservation	41	49.4%
	Agro forestry	30	36.14%
	Mulching	10	12.04%
	Fallowing	2	2.42%
	Total	83	100%

Source: field survey, 2023

From the above table 4.12 we can say that 49.4% of the respondent's soil and water conservation measures mechanisms for land rehabilitation practices. The remaining

36.14%, 12.04%and 2.41% of the respondents participate on agro-forestry, mulching and fallowing respectively. This implies most of the societies in the study area soil and water conservation, agro-forestry and mulching measures/mechanisms used relatively compare the others. Other respondent's additionally to participate on land rehabilitation practices using terracing, different plant and animal decomposed materials on farm land.

4.10. Households participation in indigenous land rehabilitation practices to promote productivity

It indicates the participation of household levels. Such as,very high, high, medium, low and very low and its participation on productivity.

Table 4.11. Household participation in land practices to promote productivity

Item	Alternative	Frequency	Percentage
How is your participation in land rehabilitation to promoting productivity in your area?	Very high	6	7.22%
	High	12	14.46%
	Medium	51	61.45%
	Low	8	9.64%
	Very Low	6	7.3%
	Total	83	100

Source: field survey, 2023

From the above table 4.13, 61.44% Shows of the respondent of households have medium to participate on land rehabilitation practices to promote productivity. The rest of 7.22%, 14.46% , 9.64% and 7.3% of the respondent households have very high, high, low and very low on land rehabilitation practices respectively. From this concluded, the productivity of cultivable land can facilitate or determine the involvement of household participation in land rehabilitation practices.

4.11. Changes for the rehabilitated lands in the study area

Table 4.12. Change for the rehabilitates

Item	Alternative	Frequency	Percentage
Do you see any change from rehabilitated lands in your area?	Yes	70	84.33%
	No	13	15.67%
	Total	83	100%

Source,field survey,2023

From the above table 4.14, 84.33% of the respondents have changes from the rehabilitated lands. The remaining 15.67% of the respondents have there is no change from the rehabilitated lands. This concluded most of the respondents says change from the rehabilitate lands in the area.

4.12. Observed changes in indigenous land rehabilitation practices

Generally, effects of land rehabilitation works require a long period of time to be appreciable by the people. Yet people can easily notice if there have been any visible changes in a short time as well. Respondents were asked to tell whether there is change in the land condition they may have observed since land rehabilitation works started. Respondents were also requested mention any changes observed in land condition as a result of land rehabilitation practices; some of the changes, according to them include natural regeneration of severely degraded areas, better growth of crops along soil and water conservation structures.

4.13. Measures that should be taken to rehabilitate degraded lands

The use of natural resource in the study area base only on fulfilling the immediate needs of the society rather than considering the long term effect. This limits soil and water conservation measures in the study area.

The planning and introduction of soil and water conservation practices have been done without involving the local community which creates resistance among some of group of people to accept the introduced new structures.

Poor supervision of soil fertility improvement and soil and water conservation works performed by farmers and assisted by, lack of reward or incentives to motivate this practices and lack of support are some of the problems observed.

There is strong desire among people of the study area for the implementation of soil and water conservation on their farm lands through productive safety net programs beneficiaries without their involvement.

4.14 Responses to interview questions

1. How do think the practice of indigenous land rehabilitation and productivity?

- In some extent increase to reduce the practice of land rehabilitation cooperate with farmers and universities.

2. What are the main problem concerning the practice of indigenous land rehabilitation and Productivity?

- Lack of awareness from farmers
- Population pressure
- Insufficient support from government bodies

3. What measures (solution) should take Rehabilitate degraded land?

Give continuous awareness and occupational support to the farmers, Extension workers should help farmers. In recently Universities support for community for planting trees.

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

This study has attempted to investigate the practices of indigenous land rehabilitation and productivity in kura kebele, Lokka Abaya Woreda. The finding of the study indicated that the livelihood of farmers in the study area depends on the subsistence agriculture. The major economic activity for all sampled households is based on farming.

On the other hand, the findings indicate that the study area has serious land degradation problems as observed in other parts area. This problem appeared to be one of the major challenges for crop production. Limited use of conservation structures, lack of fallowing, cutting trees, over grazing and over stoking are the major immediate root causes of land degradation. The underlying causes of land degradation as identified by the study are population pressure, steep slope nature of the area and erratic rain fall pattern.

Regarding responses to land degradation problems, there have been arrange of land rehabilitation practices underway in the study area by local communities, government and non-government organizations. The activities practiced in the study area include soil fertility improvement activities, soil and water conservation structures and rehabilitating degraded lands by agro forestry, forestation, and soil conservation system. The survey results and personal observation indicates that there are a marked change occurred on the land resources as a result of land rehabilitation practices. However, as compared to the magnitude of the problem, these land management and land rehabilitation practices are not enough to curb land degradation problem. There are also challenges that affect land rehabilitation practices in the study area.

The study revealed that different socio-economic factors determine land rehabilitation practices in the study area. Among the socio economic factors increase in human

population is the major challenge. With the increased population, there is subsequent increase in the size of cultivated area which intern resulted in shrinking of grazing lands and expansion of the cultivation in to areas formerly considered as marginal and extremely fragile. Continues search of new cultivable land also challenges the construction and maintenance of soil and water conservation practices and closing extremely degraded area for rehabilitation

Economically, the decreased productivity of farm land and involvement in off-farm activities pushes away people from participating in land rehabilitation practices. In addition, people who engaged in off-farm activates cannot contribute labor supply for any land rehabilitation practices as these activities require large number of labor.

In general, among the considered socio economic and institutional factors that influences land rehabilitation practices, the increasing number of population, decline in farm productivity, and in adequate attention paid by government toward securing alternate means of livelihood to ease pressure on land, the need to obtain short-term benefits rather than long-term land are the very important ones in the study area.

5.2 .Recommendations

The finding of the research indicates that there is increasing trend in land degradation problem in the study area. Different land management activities are being practiced in order to conserve resource base and to maximize agricultural production. Even if these efforts were made by government and NGOs, none of the interventions can efficiently curb the problem. Therefore, based on the finding of the research, the following actions that are believed to play significant role in improving land rehabilitation practices and solving, are recommended.

- In making intervention in land management practices, there should be active participation of local people primarily farmers. This helps to integrate indigenous land management practices with the new ones and enhance easy adoption and sustainable use of effective introduced practices. In addition it is

also essential to provide benefits to the local communities from enclosed area in sustainable manner which, in turn, increased the sense of one's resource.

- To improve the productivity of the farm land focus should be given to intensive technique of agricultural system that promote the use of various soil fertility improvement and conservation practices to boost production from small plot of land. In addition, women should be encouraged to put manures in farm fields rather than using it for fulfilling fuel wood demand.
- Land rehabilitation practices in the study area can be further promoted if they are carried out in conjunction with other developmental activities like provision of family planning education and empowering women.
- The need for a flexible extension program is necessary to broaden the concept of indigenous land rehabilitation practices.
- It would be most timely and appropriate at the federal level to produce guidelines that would take in to account the priorities of regional and local level to enclose severely degraded areas from further degradation.

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APPENDICES

APPENDIX1

Wolkite University

College of social science and humanities

Department of geography and environmental studies

Dear the respondent, this question will prepare for fulfillment of BA degree in Geography and Environmental Studies. The main goal of this questionnaire will to assess the factor affecting the practice of indigenous land rehabilitation practice in Kura kebele in case of Lokka abaya woreda. Your response would have been vital and you are not to write your name, simply put tick or mark for your answer to yes or no question and write the answer.

Part 1. Personal Information

1. Sex of the respondents A. male B. female

2. Age of the respondents A. 18-28 B. 29-38 C. 38-48 D. above 49

3. Marital status of the respondents A. single B. marred C. divorced D. widowed

4. Educational status of the respondents A, Illiterate B, 1-4 C, 5-8 D, 9-10

5. Occupation A. Daily labor B. farmer C. Civil servant D. Merchant

Part, 2. Land Rehabilitation Practices and Productivity Questionnaire

1. Is there any factor that affects indigenous land rehabilitation practices in your area?

A. yes B. No

2. If your answer is “yes” what factors affect indigenous land rehabilitation practices in your area? A. social B. economical C. institutional

3. What are the major economic factors that determine the practice of indigenous land Rehabilitation in your area? A. income B. employment C. technology

4. What are the institutional support related factors that determines the practice of indigenous Land rehabilitation? A. assistance from outside B. access to extension Service C. support indigenous land rehabilitation practice by government

5. What are the socio-cultural factors that determine the practice of indigenous land rehabilitation in your area? A. population pressure B. farmers to involve C. participation to youth

6. How do you see land rehabilitation practice in your area? A. increasing B. decreasing C. no change D. unknown

7. What are the major challenges for indigenous land rehabilitation practices in your area?

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……..

8. Did you participate in land rehabilitation practices? A. yes B. no

9. If your answer is "yes" what type of measurement or mechanisms do you participate in your area? A. soil and water conservation B. agro-forestry C. Fallowing D mulching

10. How do you see households' participation in indigenous land rehabilitation practices to promote productivity? A. very high B. high C. medium D. Low E. Very low

11. Did you see any change from the rehabilitated lands in your area? A. yes B. no

12. If your answer is "yes" what kind of change have you observed?

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……

13. If your answer is "yes" when the extension service is practices? A. weekly B. monthly C. in three months

14. What further measures should be taken to rehabilitate degraded lands in your area……..

…….

APPENDEX 2

PART 3. INTERVIEW QUESTIONS

1. How do think about about the practice of indigenous land rehabilitation and productivity?
2. What are the main problem concerning the practice of indigenous land rehabilitation and productivity
3. What further measures should take to rehabilitate degraded land in your area?