AN ASSESSMENT OF PRACTICES AND CHALLENGES OF COMMUNITY PARTICIPATION ON FOREST MANAGEMENT: THE CASE OF GESSA TOWN

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ABSTRACT

The complex nature of natural resource management demands research that uses an interdisciplinary approach by combining biophysical and socio-economic. Community based participation on natural resource management is being adopted widely as a possible solution to address such complex problems. Moreover, lack of active community participation on forest resource management causes the loss of available forests in the study area. Deforestation for fuel wood, house construction and human settlement become the serious problem for forest resource destruction in the area. Objective of the study is to assess the community participation in forest resource management in the Gassa town, Dawro zone, southern Ethiopia. The primary data obtained from the fieldwork were supplemented by secondary data in order to bridge information gap from primary sources. Secondary sources include published materials such as reports, official records, census records, project reports, research papers and data files from internet/ web pages. Survey result indicated that Forest management major problem were deforestation and less participation on management practices, which affected level of economic income, age group, sex ratio, marital status and education level.

Keywords: An Assessment, Practices, Challenges, Community Participation, Forest Management.

INTRODUCTION

1.1 Background of the Study

The complex nature of natural resource management demands research that uses an interdisciplinary approach by combining biophysical and socio-economic dimensions (Kuru, 1990). Community based participation on natural resource management is being adopted widely as a possible solution to address such complex problems. Active participation and knowledge of local groups such as farmers, official experts and government organs are understood to be valuable bodies in community levels natural resources management, decision making and policy planning processes (FAO, 1994).

It is also recognized that community participation in forest management plays an important role in the sustainable management of natural resources, such as soil and water (Muller, 1996). The potential disappearance of community participation in forest resource management could have negative effect on forest resource availability and distribution on national and world wide level (Clark, 1990). Forests and the benefits they provide in the form of wood, food, income, and watershed protection have an important and critical role in enabling people to secure a stable and adequate food supply (Horni, 1990). The world's forests play active roles such as providing

renewable raw materials and energy. The community participation on forest management results with forest resource availability. Furthermore, forests protect land, water and other environmental resources which were damaged by human activities and other disturbances (Bishaw, 1990). Since the best way to maintain species is to maintain their habitats, protected areas are an essential means for sustaining diversity. Protected areas also help in stabilizing the local climate, protecting watersheds, and preventing erosion. Protected areas constitute the most widespread mechanism used to conserve the remaining natural forests of Ethiopia. However, the present coverage of natural forest is generally inadequate and deforested in many areas of the country in general and study area in particular.

Management must be a part of a broader process of managing the whole landscape. Thus, protected areas will contribute to the management of the remaining natural forests in Ethiopia, if they are able to meet the legitimate developmental aspirations of the people that live in and around them (Sayer et al. 1992). Protection and management of the remaining natural forests is critical to protect species and biodiversity. The identification, demarcation, and protecting the remaining natural forests and wildlife and leaving them as a heritage to the next generation will be beneficial to present as well as the future generations.

1.2 Statement of the problem

The contribution of forests for economic development and environmental security of a country is not questionable. Deforestation and land degradation, however, are impairing the capacity of forests and the land to contribute to food security, and to provide other benefits, such as fuel wood and fodder in Ethiopia. Ethiopians are facing rapid deforestation and degradation of land resources (Yirdaw, 1996).

The increasing population has resulted in extensive forest clearing for agricultural use, overgrazing, and exploitation of existing forests for fuel wood, fodder, and construction materials. Forest areas of the country have been reduced from 40% a century ago to an estimated less than 3% today. This is also true in the study area. The current rate of deforestation in Ethiopia is estimated to be 160,000 to 200,000 hec per year (FAO, 1981). Moreover, lack of active community participation on forest resource management causes the loss of available forests in the study area. Deforestation for fuel wood, house construction and human settlement become the serious problem for forest resource destruction in the area.

Despite the large commitment of scarce resources by both governmental agencies, however success in tree planting and community participation on management process has been limited. The current tree planting practices even in the area is not sufficient to sustain the forest resources. The paper will review the practices and challenges of community participation on forest management in Gassa town. The study also discusses the causes and consequences of deforestation and the role and challenges of community participation for the rehabilitation of forests in the study area.

1.3 Objectives of the study

1.3.1 General Objective

The general objective of the study is to assess the community participation in forest resource management in the Gassa town, Dawro zone, southern Ethiopia.

1.3.2 The specific objectives

- 1. To explain the role of community participation on forest management in the study area.
- 2. To investigate the practices of forest management and destruction in the study area.
- 3. To identify the challenges which hinder community participation on forest management in the study area.
- 4. To recommend and suggest the optional solution to participatory forest management.

1.4 Research questions

Based on the specific objectives the following research questions are designed for this study.

- 1. What are the roles of community participation on forest management?
- 2. What are the practices of forest management and destruction in the study area?
- 3. What factors are hindering community participation on forest resource management in the study area?
- 4. What solution to be recommended for future participatory forest management?

1.5 The significance of the study.

The study findings are going to help the town agricultural officials, experts and development agents to design and invest the program and projects that could bring positive action to conserve forest resources, enhance environmental rehabilitation, to avert the vicious cycle of poverty and natural resource degradation. Therefore, the outcomes of the study are used for formulating future environmental policies and strategies at local and national level.

1.6 Delimitation/Scope of the study.

The study has been limited to an assessment of the practices and challenges of community participation on forest management in Dawuro Zone, Loma Woreda. The study is confined to the natural forest of one Town (Gassa Town) as a sample from 35 kebeles of this town. This is due to lack of finance and time to cover the whole kebeles and to reduce distortion of data collection since it's residential please for researcher.

1.7 CONCEPTUAL FRAME WORK

Under the present complicated socio-economic and changing environmental conditions, and with the increasing pressure on natural resources, the long term conservation and use of forests is at stake. Without proper management planning guidelines, it will be difficult to respond to growing and changing needs of the society, and thus to conserve and manage the natural resources in a sustainable way. Management plans are basic instruments for managing these natural resources, either for timber production, conservation or other purposes. Forest Management Plans (FMP) have gained in importance as both experts and donors place more and more emphasis on FMP as a tool for (sustainable) forest management (SFM). To be certified for

sustainable (timber) production, a management plan is even a pre-requisite (FSC, 2000). Also donor agencies take management plan preparation as output of a conservation project.

In conceptual thinking about forest management a shift has been made towards integrated management. It is accepted that forest ecosystem diversity and the plurality of stakeholders, are the basis for wise management (Panayotou and Ashton, 1992). The implementation of sustainable use and conservation policies can only succeed if supported by all stakeholders. Therefore, a participatory management planning process is crucial to the success of the implementation.

These evolving conceptual changes have not facilitated the preparation and implementation of management plans. In fact, management plans have become more complicated: more disciplines involved, more partners involved, participatory approaches, more pressure from society, market and political level.

Basically an FMP is a plan which describes the management of a forested area in order to reach some (predefined) objectives. But the concepts of what an FMP is differs among people. Some plans are forest management systems set up to sustain a logging operation while other complicated plans manage forests at national level. An FMP is not just a set of management activities or an extensive description of an area, but also comprises the process of decision making.

A Forest Management Plan is a written, widely supported and approved document, which describes decisions and activities to produce anticipated objectives with regard to use and conservation of forests in an area and the process and procedures how the objectives, decisions and activities are implemented.

REVIEW OF LITERATURE

2.1 Forest resources and Forestry

According to Clark (1990) forest is an extensive continuous area of land dominated by large trees. Since Ethiopia is ecologically suitable for vegetation, it is originally covered with high land forests of various species and arid parts of country were covered with scanty vegetation. The high forests consisted of dense stands of trees rising up to 30 meters in height with more or less a continuous canopy (Gizachew, 1994). Forestry is the science and art of managing wood lands, along with associated wet lands and water for the benefits of mankind. It is chief objectives of which usually engaged on rising and harvesting of successive crops of timber activities related to management of soil, water and wild life conservation (Abdulkadir, 1992).

2.2 Purposes of forest management

Forest management has multiple purposes since the past history and which is continued but could only leads to growing conflicts among the interests of the concern (Abebe, 2000). Forest management can be defined as predominantly natural areas safeguarded by law or custom where species and ecosystems are conserved for current and future generations. Since the best way to maintain species is to maintain their habitats, protected areas are an essential means for sustaining diversity. Protected areas also help in stabilizing the local climate, protecting watersheds, and preventing erosion. Protected areas constitute the most widespread mechanism

used to conserve the remaining natural forests of Ethiopia. However, the present coverage of natural forest is generally inadequate. Management must be a part of a broader process of managing the whole landscape. Thus, protected areas will contribute to the management of the remaining natural forests in Ethiopia, if they are able to meet the legitimate developmental aspirations of the people that live in and around them (Sayer et al. 1992). Protection and management of the remaining natural forests is critical to protect species and biodiversity in Ethiopia. The identification, demarcation, and gazetting of the remaining natural forests and wildlife and leaving them as a heritage to the next generation will be beneficial to present as well as the future generations (Getahun, 1988). No country has unlimited extents of forests and the reservation of any considerable areas for one inclusive purposes rather it creates economic and social stress.

2.3 The concepts of assessments of Community participation

An assessment of communities' participation among the rural and urban people in tree planting and management of the natural forests is very important to achieve the proposed strategy. Involving community and local people who live around the forests in tree planting and natural resource management is critical for management and development of forestry. This can be done through a participatory process where community and local people are involved in planning, design and implementation of the management plan. This exchange of information and partnership will help build confidence and to reassure all that the programs are relevant to their needs and ensures they have a sense of responsibility towards the project (Uibrig, 1989).

Attention should be given to the creation of effective local management organizations to mobilize community in the management, development and appropriate use of forests and agroforestry products. Institutional arrangements at the community level are often key elements in natural resource management in planning agroforestry and tree planting for field implementation (FAO. 1978). The FAO experience in small community development work suggests organizing community into small homogenous groups of about 10-15 persons or heads of families so the community can more easily obtain government service. These informal groups work best when community have similar incomes, problems and aspirations (Rao, 1986).

2.4 Factors that restrict community from participatory forest management

2.4.1 The dependency of local people on forest resources

The local peoples are both the victims and the causes for environmental degradation that result in forest destruction. More than two third of the people of different Ethiopian localities were in the rural areas that could fragile the environment. They depend largely on natural resources for their livelihood. They do not have alternative man made forests. As a result land less farmers forced to cultivate unsuitable areas such as hill side where the area are formerly covered by natural forests (EFAP, 1993).

2.4.2 The increasing of farm and grazing lands

Agriculture is the mainstay of the country's economy in which large proportion of population derives its livelihood from these sectors. As a result forests are cleared to obtain more

agricultural lands and grazing lands (Yirdaw, 1996). Absence of participatory forest management among local people due to decline of agricultural lands leads to a continuous decline of forest and wood lands. In this aspects forest rich high lands with their adequate rain fall and moderate temperature have suffered much from lack of participatory forest management (MOA, 1991).

2.5 Community forestry practices in Ethiopian High lands

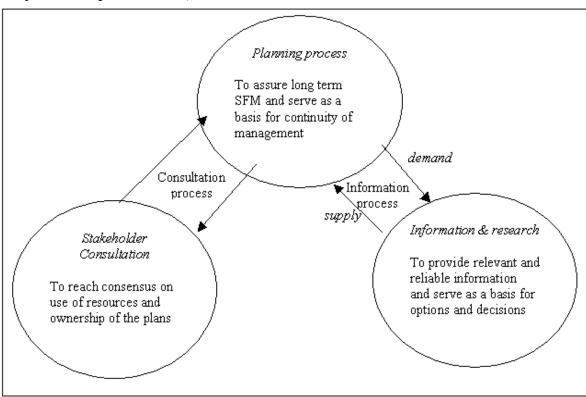
The term community forestry was defined in 1978 as "any situation which immediately involves local people in forestry activities. It embraces a spectrum of situations ranging from woodlots in areas which are short of wood and other forest products for local needs through the growing of trees at farm and community level to provide cash crops and the processing of forest products at the household, artisan or small industry level to generate income, to the activities of forest dwelling communities (Hammond, 2001). The activities so encompassed are potentially compatible with all types of land ownership. While it thus provides a partial view of the impact of forestry on rural development, it does embrace most of the ways in which forestry and the goods and services of forestry directly affect the lives of the rural people" (FAO, 1978).

Based on the definition above, community forestry is perceived as encompassing all activities that are carried out by individual households, farmers as well as activities involving the community as a whole. These activities are not only limited to tree planting on farms and households, but also include activities such as the use and the management of natural resources and the supply or provision of tree products from the surrounding vegetation (Bekele, 1994). Community forestry also refers to the promotion of self-help management and use of trees to sustainably improve the livelihoods of the local people. The community sector of Ethiopia's forestry has been assigned to strive for meeting the basic needs of the rural as well as partly the urban population in both fuelwood and construction poles, including other small-scale timber (Wood, 1990). Soil and water management through afforestation and land rehabilitation also were outstanding efforts of the sector. Despite major problems of deforestation and land degradation, massive soil management and afforestation programs were undertaken in Ethiopia since the early 1970s (Hurni, 1990; Gamachu, 1990). These programs were undertaken by various agencies of the government through the assistance of international and bilateral organizations such as FAO. The Community Forestry Department of the Ministry of Agriculture was the main government agency involved in the planning and execution of soil conservation measures and afforestation programs.

4.6 Agro forestry practices

Agroforestry is not totally a new concept in Ethiopia. It is an age-old practice where by community maintains trees in croplands. Such woody perennials are retained for their multiple uses and benefits, such as their nitrogen-fixing properties and soil improvement capacity, and the provision of fodders, fuel wood, and fruits (Hoekstra et al., 1990). The role of agroforestry in satisfying the basic needs of the rural peoples of Ethiopia is large, but little research has been initiated to identify suitable agroforestry technologies and appropriate tree species for specific areas of Ethiopia. However, based on the work done by the Technical Committee for Agroforestry

in Ethiopia (Hoekstra et al 1990), I propose the following agroforestry technologies appropriate for the land-use systems in the Ethiopian highlands. Even where the proposed technologies were not implemented, they can at least serve as baseline information for further development of agroforestry in Ethiopia (Bishaw, 1988).

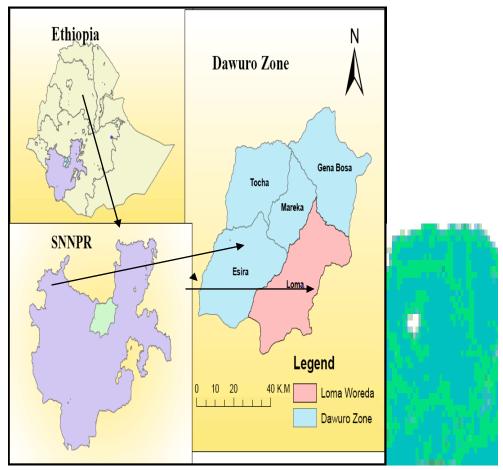


STUDY AREA AND RESEARCH METHODOLOGY

3.1 Description of Study Area

3.1.1 Location of study area

Gessa Town is one of the largest town in terms of areal extent and population size in the Loma wereda southern Region. It is bordered by Bokole River which separate it from currently founded called manara kebele Northern, atho kebele southern, ella kebele west and gessa chare eastern direction. Astronomically, the study area is located between 8°40'N latitude and 36°40'E longitude. The town is divided into 21 administrative rural kebeles and one Administrative town namely Gessa. Gessa town forest is mostly dominated by natural forests found in Bokole river valley which is located at ten kilometer from the capital of the town. The study area has a total area of about 9,172 hectars, out of this 59.8% is arable/cultivated, 9.6% pasture, 8.4% forest covered and the remaining 22.2 is swampy, mountain and unusable lands. This town is inhabitted by 86,329 total population (CSA,2007) whith 42,093 men 44,236 womens.Out of this total population 10.6% are urban dwellers. And the majority of these populations are the followers of Protestantism (48.85%), Orthodox Christianity (45%) and Muslim (5.59%)



Map of study area

3.1.2. Relief and drainage of the study area

The relief of the study area is generally characterized by high lands and ridges which are the extension of northern gessa and south gessa highlands except bokole River Valley. Then Gessa Town is known by the highest altitude Loma woreda. The study area is generally characterized by plateau, ridges and rugged terrain. The altitude of the study town lies between 1500m – 1800m above sea level. The slopes of the study area are categorized as gentle, moderately sloping and steep slope.

In the town, there are a number of temporary springs and permanent rivers. The entire area drains towards the bokole River. The Rivers of the study town starts from the high lands of Tulema town. Most of the rivers like Kotore and Manji River are flow towards the Bokole Valley. Zoa is one of the most tremendous river in Dawuro zone.

3.1.3. Climate

Climate is one of the elements of the physical environment which has a pronounced impact on settlement pattern, human way of life, the type of soil, economic activities, flora and fauna existed and developed so forth. Among different climatic elements temperature and rainfall have a considerable impact in such an agrarian country like Ethiopia and in the study area. The climate of the Gessa town forest is characterized by moderate temperature and rain fall and it is categorized under Woina Dega Ethiopian ago-ecological zone (Abera, 2013).

According to the Gessa town meteorological data, the annual average maximum and minimum temperature of the study area is 31°c and 18°c respectively (fig.3.1). Its mean annual temperature is about 25°c. The total annual rainfall of the study area ranges between 950-1500 mm. The rainfall pattern generally is bi-modal, with over 70 percent falling between July and August. The main rainy season in the area is summer (Kiremt) that ranges from the June to August with maximum rain fall and two minimum rainy seasons such as the Spring (Belg) and Authomn (Tseday) with little rain fall. The dry season (Bega) in the area is mostly from December to February. The dry season limits the water availability in the study area. The months with maximum rainfall and temperature are July and February respectively.

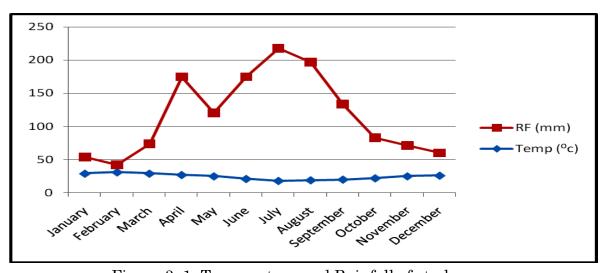


Figure 3. 1. Temperature and Rainfall of study area

3.1.4. Geology and Soil

Most of geomorphological features of the study area are disturbed by exogenesis forces such as weathering and erosion. The study area is dominated by relatively soft weathered rocks particularly susceptible to erosion. Major type of rock in the area is sedimentary followed by volcanic rocks. The soil on soft and deeply weathered rock is deep and free from stones (Habtamu, 2006). Soil can be characterized by its structure, color, consistence, texture, and abundance of roots, rocks and carbonates (Abay, 2012). Most soils have a distinct profile, which is a vertical section of soil through all its horizons and extends up to the parent materials or it is sequence of horizontal layers (Pidwirny, 2007). Generally, these horizons result from the processes of chemical weathering, eluviations, illuviation, and organic decomposition. The soil forming factors in the study area are climate, parent material, relief/topography and flora/fauna. The two dominant types of soils covering the present study area are Nitosols and Vertisols (Abay, 2012). Nitosols are the dominate soil in the catchment. The soil types of the area comprise 50% silt, 20% clay and 30% sandy (Ibid). Farmers also identified soil color of the study area as black 19 %, reddish 63 %, gray 2% and brown 16%. Generally soil color in the study area is dominated by red followed by black (Abay, 2012).

3.1.5. Vegetation cover

The area was once been covered by dense forests in hillsides, river valley of Zoa and uncultivated rocky lands. Currently, vegetation cover is at a risk of removing, and replaced by settlement, cultivation and grazing lands. This is due to the fact that rapidly growing population result with the removal of available forests cover of the area for the need of more land for settlement and agricultural purposes as well as grazing with large livestock population. Generally, the vegetation coverage of the study area is categorized in to modern and indigenous tree varieties.

3.2 Research Methodology

3.2.2 Data Type and Sources

To find the accurate information about the study area, two types of data sources are used. These are primary and secondary data sources. The primary data was collected from villages, kebele and woreda natural resources management experts, town leaders and household heads. The primary data obtained from the fieldwork were supplemented by secondary data in order to bridge information gap from primary sources. Secondary sources include published materials such as reports, official records, census records, project reports, research papers and data files from internet/ web pages.

3.2.3 Data gathering instrument

Detailed information about the study area was collected by questionnaire, field observations, informal interview and focus group discussion. At the beginning stage of the survey, informal meetings were undertaken with village elders, experts and development agents and community representatives in order to elaborate forest resources and the problems of deforestation. In addition to the informal meeting, transect walk across the village were conducted in order to obtain all the necessary physical information and determine the questionnaire that need to be included in the survey. The survey questionnaire included both open and close ended questions which was pre—tested by administering it to selected respondents. As farmers in the area are speaking Dawuregna language as enumerators and those who know the area well were recruited for the enumeration. The questionnaires had handled by skilled enumerators who were trained to give appropriate data.

3.2.4 The sample size and sampling procedures

In order to draw valid inferences from the sample and to ascertain the degree of accuracy of the result, the study employed sampling procedures. Accordingly the sample kebele namely Gessa town is selected from the whole 35 kebeles surrounding the Gessa town purposely. Because the practices and challenges of forest management at this town is severe compared with that of other town, lack of time and finance to cover the whole town and the geographical proximity of the researcher's residential place. Then, the sample population of the study is selected from the total population of the households in the selected town. The population of study town comprises 520 household heads. Thus, 10% of the total household heads from selected sample town were considered using random sampling techniques, which make up 52 sample household heads for the study.

3.2.5 Data analysis

The methods of data analysis were employed by combining both qualitative and quantitative methods. The qualitative methods include the verbal description of the primary data whereas, the quantitative methods includes data tabulation, computation of frequencies and descriptive statistical measures.

1. Result and discussion

This chapter deals with findings, which are found based on respondents responses from males and females in the study area. Therefore, the data presented in this chapter is also found from questionnaire, observation and interview which were administered to 35 sampled respondents.

4.1 Description of Respondents

4.1.1 Age Distribution of Respondents

Table 4.1: Age distribution of respondents

Age	Frequency	Percentage
20-39	18	51.42
40-59	12	34.28
60-79	5	14.28
Total	35	100

Source: own survey, 2020.

Table 4.1 shows the age of 51.42 % of respondents were economically active people which are found between age of 20-39 and 34.28% of the respondents were found between under age of 40-59 and 14.28 % of the respondents were found 60-79 age groups. Considering the above table 4.1, we understand that the active age respondents are highly participated on the questionnaire.

4.1.2. Sex composition of respondents

Table 4.2: Sex composition of respondents

	*	
Sex	Frequency	Percentage
Female	20	57.64
Male	15	42.85
Total	35	100

Source: own survey, 2020.

Table 4.2, indicates that 57.64% of the respondents were female and 42.85% of the respondent were male. This shows the number of female migrator to urban area is high.

4.1.3 Marital status of respondents

Table 4.3: Marital status of respondents

Marital status	Sample	Percentage
Married	18	51.42
Single	12	34.28
Divorced	3	8.57
Widowed	2	5.71
Total	35	100

Source: own survey, 2020.

According to Table 4.3, 51.42% of respondents were married and 34.28% were single and 8.57% and 5.71% of the respondents were divorced and widowed respectively

4.1.4 Educational level of respondents

Table 4.4: Education level of respondents

Sampled	Percentage
2	5.71
5	14.28
1	2.85
4	11.42
2	17.14
6	20
7	22.85
8	5.71
35	100
	2 5 1 4 2 6 7 8

Source: own survey, 2020.

According to table 4.4, the educational level of the respondents of 5.71,14.28% were read and write, 2.85% of the respondents were primary education, 11.42%, 17.14%, 20%, 22.85%, 5.71% and 2.5% of the respondents were diploma, secondary education, degree, certificate, uneducated and masters respectively. This indicates that most of the respondents could read and write.

4.1.5 Occupational status of respondents

Table 4.5: Occupational status of respondents

Job description	Frequency	Percentage
Government employees	15	42.85
Self-employees	10	28.57
Laborer	5	14.28
Merchants	5	14.28
Total	35	100

Source: own survey, 2020.

The jobs of resident's ranges from laborer up to government employee, about 42.85% of respondents were government employee, 28.57% of respondents were self-employee, 14.28% were merchants and 14.28% were laborer.

4.1.6 The income level of the respondents in the study area.

Table 4.6: Income level of the respondents

		-
Income level	Frequency	Percentage
<1000	12	34.28
1001-3000	6	17.14
3001-5000	10	28.57
5000 and above	7	20
Total	35	100

Source: own survey, 2020.

According to the above table 4.6, most of respondents have low income which ranges from <1000 and it accounts 34.28%, 17.14%, 28.57%, and 20% low level. It shows a greater number of respondents have low income level.

4.2 problem of forest management

Table 4.7: The causes of forest management problems

Item	Frequency	Percentage
Maladministration	5	14.28
Deforestation	10	28.57
Cattle grazing	5	14.28
Less community participation	10	28.57
Shortage of land	5	14.28
Total	35	100

Source: own survey, 2020.

The above table 4.7, 14.28% of the respondents answered the cause of forest management problems was maladministration 28.57%, 14.28%, 28.57% and 14.28% of the respondents were answered deforestation, cattle grazing, less community participation, shortage of land respectively.

4.3 The responsible body of forest

Table 4.8: The responsible body of forest in Gessa kebele

Item	Frequency	Percentage
Government	8	22.82
Community	10	28.57
Non-government organization	2	5.71
Each individual	15	42.85
Total	35	100

Source: own survey, 2020

The above table 4.8, 22.85% of the respondents were answered the responsible body of forest in gessa kebele is government, 28.57%, 5.71%, 42.85% were community, non-governmental organization, each individual respectively.

4.4 The significance of forest

Table 4.9: The main significance of forest

Item	Frequency	Percentage
Keep the moisture of the land	5	14.28
Give good weather condition	8	22.85
Use for timber, charcoal, fuel and for	7	20
construction purposes		
Keep soil erosion	10	28.57
Maintain water concentration of land	5	14.28
Total	35	100

Source: own survey, 2020.

The above table 4.9, 22.85% of the respondents were answered the significance of forest 14.28, 33.85, 20, 28.57, 14.28, keep the moisture of land, give good weather condition, use of timber, charcoal, fuel and for conctraction purposes, keep soil erosion, maintain water concentration of land respectively.

4.5 The method of forest conservation

Table 4.10: Shows the method of weather conservation

Item	Frequency	Percentage
Regulated and planned cutting of tree	5	14.28
Control over forest	3	8.57
Reforestation and assorestation	6	17.14
Check over forest clearance for agricultural and	4	11.42
habitation purposes		
Protection of forest	4	11.42
Proper utilization of forest and forest products	8	22.85
Roles of government in forest concern	5	14.28
Total	35	100

Source: own survey, 2020.

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

Community based participation on natural resource management is being adopted widely as a possible solution to address such complex problems. Active participation and knowledge of local groups such as farmers, official experts and government organs are understood to be valuable bodies in community levels natural resources management, decision making and policy planning processes.

Management must be a part of a broader process of managing the whole landscape. Thus, protected areas will contribute to the management of the remaining natural forests in Ethiopia. The method of data description was qualitative methods include the verbal description of the primary data whereas, the quantitative methods includes data tabulation, computation of frequencies and descriptive statistical measures.

The majority of respondents was found between ages 20-59 was (51.42%), indicated that, the community of economically active people which age group were highly participated in forest management in the area. Sex ration of respondent indicated female were more participate in the area (57.64%) than male (42.36%). The majorities (51.42%) of respondents were married, which more participated in community forest management practices, education Status of respondents (77.14%) were educated greater than secondary up to masters, it indicated more educated community participated on forest management, and in Gassa town, the majority of community were educated. The jobs of resident's ranges from laborer up to government employee, and the majorities (42.85%) of respondents were government employee. It indicated that government employee were more responsible to participation on forest management. The level of economic

GALAXY INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL (GIIRJ) ISSN (E): 2347-6915 Vol. 9, Issue 6, June (2021)

income of respondents indicated that 34.28% was low. The level of income was affects the participation on forest management.

The problem of forest management in the Gassa, the result of respondents shown deforestation and less participation on management were major one accounted (57. 14%).

The responsibility of forest management in the communities was include, government, community common, individual and non-government organization, but the each individual taken 42.85% of the majorities of the community.

Significance of forest management in the study area were Keep the moisture of the land, Give good weather condition, Use for timber, charcoal, fuel and for construction purposes, Keep soil erosion and Maintain water concentration of land.

Methods of forest management or conservation in study area were Regulated and planned cutting of tree, Control over forest, Reforestation and assorestation, Check over forest clearance for agricultural and habitation purposes, Protection of forest, Proper utilization of forest and forest products and Roles of government in forest concern.

Generally, forest management major problem were deforestation and less participation on management practices, which affected level of economic income, age group, sex ratio, marital status and education level.

6.2. Recommendations

- The low economic income was factors affect the forest management practices, job creation could be important to forest management
- Proper utilization of forest and forest products and reforestation was the best method of forest management practices in study area would be used for all near town
- Government has less responsibility in Gassa on the forest management practices was affect the management, so government take responsibility

REFERENCES

- 1. Abay A (2011). Construction of Soil Conservation Structures for improvement of crops and soil productivity in the Southern Ethiopia Journal of Environment and Earth Science. Vol 1, No.1, 2011.
- 2. Abdulkadir, A. (1992). Report of periodic productivity of Acacia saligna and Leucaena leucocephala hedgerows grown in alleys with maize. Faculty of Forestry, Alemaya University of Agriculture, Ethiopia. 8p.
- 3. Abera, A. (2013). Integrated soil management practices in rehabilitating degraded lands in Ofute catmint, southern Ethiopia
- 4. Bekele, E. (2003). Causes and Consequences of Environmental Degradation in Ethiopia. In Forum for Social Studies, March 2003. Environment and Environmental change in Ethiopia. Consultation papers on Environment No. 1, PP 24 31. Addis Ababa, Ethiopia.
- 5. Bishaw B. (1990). Deforestation and Land Degradation on the Ethiopian Highlands: A Strategy for Physical Recovery. Northeast African Studies 8:7-25
- 6. Bishaw, B. (1988). An Afforestation Program in the Legeambo Farmers Producer Cooperative, Hararghe Highlands Ethiopia. Mountain Research and Development 8, no.2/3
- 7. Central Statistical Authority (CSA), 2006. Ethiopia Statistical Abstract. Addis Ababa.

GALAXY INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL (GIIRJ) ISSN (E): 2347-6915 Vol. 9, Issue 6, June (2021)

- 8. Ethiopian Forestry Action Program (EFAP), 1993. Ethiopian forestry action program: the challenge for development (Vol. II). Ministry of Natural Resources Development and Environmental Protection, Addis Ababa, Ethiopia.
- 9. FAO, (1994). Forest Resource Assessment 1990. Tropical countries. FAO Forestry paper series 112. FAO, Rome 59 p.
- 10. FAO. (1978). Land Use and Land Cover Ethiopia 1:1,000,000. Ministry of Agriculture, Land Use Planning and Regulatory Department, Addis Ababa, Development and Environmental Protection, Addis Ababa, Ethiopia
- 11. FAO. (1994). Ethiopian highlands reclamation study, Ethiopia. Final Report. FAO, Rome
- 12. Food and Agriculture Organization of the United Nations (FAO), (1981). Ethiopian highlands reclamation study, Ethiopia. Final Report. FAO, Rome
- 13. Gamachu, D. (1990). Environment and Development in Ethiopia. Department of Geography, Addis Ababa University, Ethiopia, 54–96.
- 14. Getahun, A. (1988). An Overview of the Ethiopian Highlands: The Need for Agroforestry Research and Development for the National Survival. In IAR/ICRAF National Agroforestry Workshop Proceedings. Awasa, Ethiopia, 5–16.
- 15. Habtamu E. (2006). Adoption of physical soil and water conservation structures in Anna watershed, Hadiya Zone, Ethiopia. Regional and local development studies, Addis Ababa, Ethiopia.
- 16. Hammond, L. (2001). Lessons Learned Study: Ethiopia Drought Emergency 1999-2000. Commissioned by USAID/Food and Humanitarian Assistance. Ethiopia.
- 17. Hoekstra, D., E. Torquebiau and B. Bishaw, eds. 1990. Agroforestry: potentials and research needs for the Ethiopian highlands. No. 21. ICRAF, Nairobi, Kenya. 115 p.
- 18. Hurni, H. (1990). Degradation and Conservation of Soil Resources in the Ethiopian Highlands. In Messerli, B. and Hurni, H. (eds.). African Mountains and Highlands Problems and Perspectives. Marceline, Missouri: Walsworth Press Co., 51–63.
- 19. Hurni, H. (1990). Degradation and conservation of the resources in the Ethiopian highlands. Mountain Research and Development 8: 123-130.
- 20. Hurni, H. (1993). Land degradation, famine, and land resource scenarios in Ethiopia, in: Pimentel, D. (Eds.), World Soil Erosion And Conservation. Cambridge, pp. 27–61.
- 21. Kuru, A. (1990). Roots of Deforestation Problems in Ethiopia. In: Matti, P. et. al. (ed.) Deforestation or Development in the third World? Vol. III. Helsinki.
- 22. Ministry of Agriculture (MOA), (1991). Forestry Report Ethiopia. Prepared for the Tenth World Forestry Congress. (Unpublished) Addis Ababa, Ethiopia.
- 23. Rao, Y.S. (1986). Some socio-economic and institutional aspects of forest land use. P. 3-10. In Land use, watersheds, and planning in the Asia-Pacific Region. RAPA Report 1986/3. FAO/UN, Bangkok.
- 24. Sayer, A.J., Harcourt, S.C. and Collins, M.N., (eds) (1992). The conservation Atlas of tropical forests Africa. IUCN. Cambridge, UK. 282 p.
- 25. Sonneveld, B.G.J.S., (2002). Land Under Pressure: The Impact of Water Erosion on Food Production in Ethiopia. Shaker Publishing, Maastricht.
- 26. Tadesse G. (2001) Land degradation: A challenge to Ethiopia. Environmental Management 27:815–824
- 27. Tekle K (1999) Land Degradation Problems and Their Implications for Food Shortage in South Wello, Ethiopia. Environmental Management 23:419-427
- 28. Uibrig, H. (1989). Report on land use survey in the Alemaya Catchment, Hararghe Highlands, Eastern Ethiopia. Faculty of Forestry, Alemaya University of Agriculture, Ethiopia. 54 p

GALAXY INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL (GIIRJ) ISSN (E): 2347-6915 Vol. 9, Issue 6, June (2021)

- 29. Wood, A. 1990. Natural Resource Management and Rural Development in Ethiopia. In: Pausewang, S. et. al. (ed.) Ethiopia Rural Development Options. P. 187-198. Zed Books Ltd.
- 30. World Agro forestry Center, (2003). http://www.world agroforestry centre.org/.
- 31. Yirdaw, E. (1996). Deforestation and Forest Plantations in Ethiopia. M. Palo and G. Mery (eds), Sustainable Forestry Challenges for Developing Countries, 327-342. @1996 Kluwer Academic Publishers. Printed in the Netherlands.
- 32. Zeleke G. and Hurni H, (2001). Implications of land use and land cover dynamics for mountain resource degradation in the north-western highlands. In Mountain Research and Development. 21, 184-191