Addis Ababa University
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Factors Affecting People's Participation in Participatory Forest Management: The case of IFMP Adaba-Dodola in Bale zone of Oromia Region

By

Terefe Degeti

July 2003
Addis Ababa

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A Thesis submitted to the school of graduate studies of Addis Ababa University in partial fulfillment of the requirements for the degree of Master of Arts in Regional and Local Development Studies (RLDS)

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The thesis is my original work, has not been presented for a degree in any other University and all that sources of material used for the thesis have been duly acknowledged.

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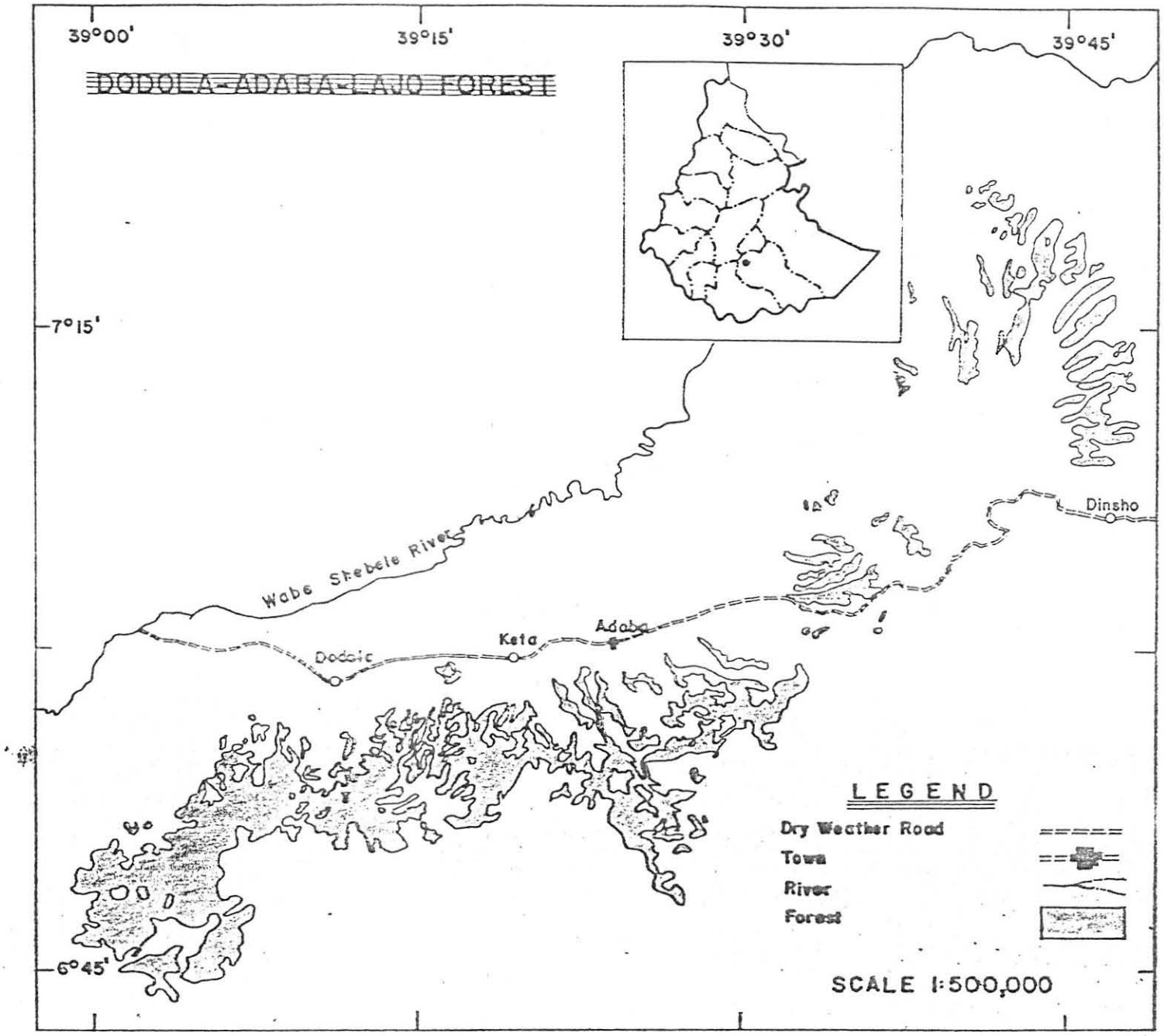
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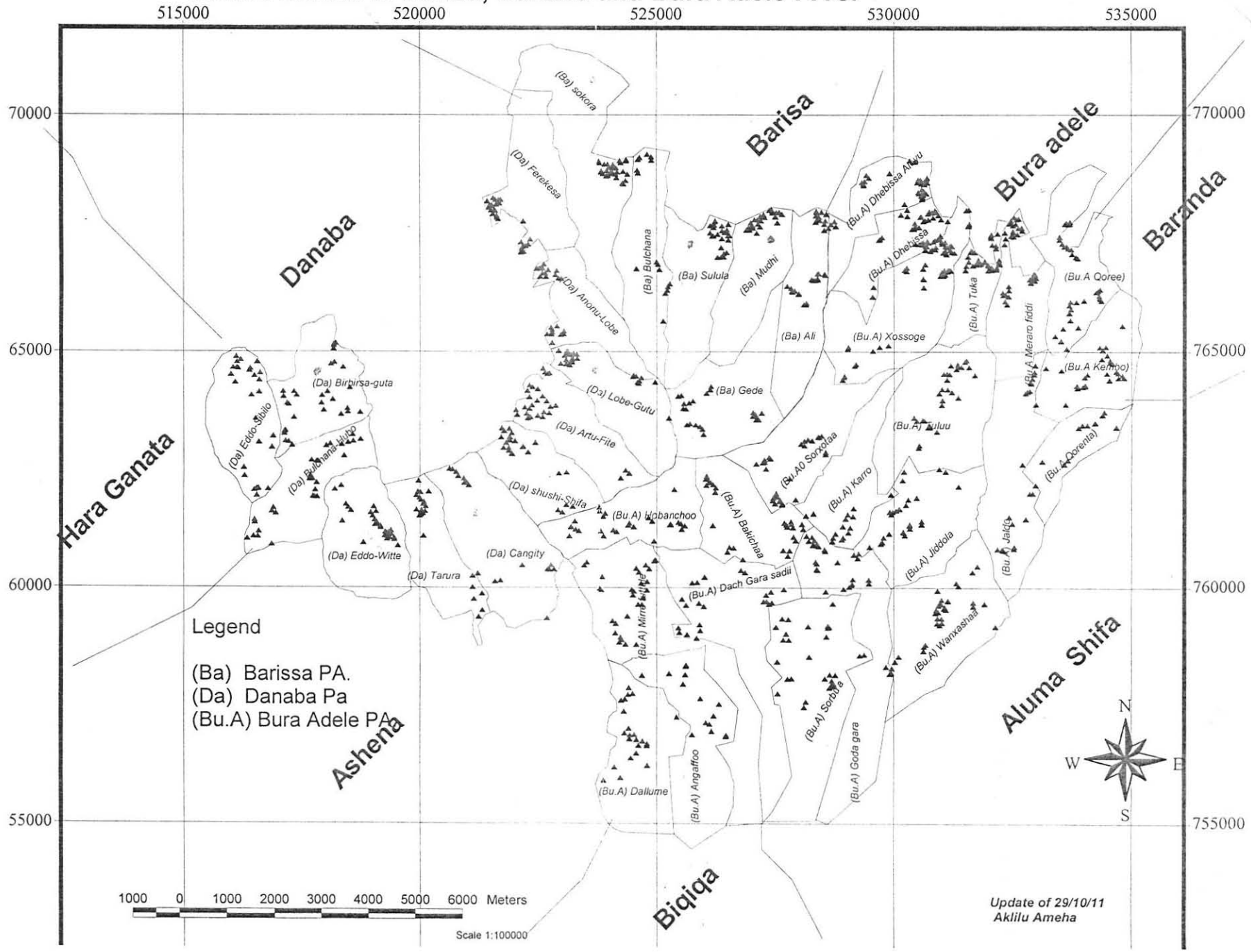
WAJIB Blocks of Barisa, Danaba and Bura Adele PA's.



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(Ba) Barissa PA.
(Da) Danaba Pa
(Bu.A) Bura Adele PA

Abstract

Forest is one of the most essential kinds of resources that human beings and other animals depend on. It regulates environmental and ecological changes in which soil, water, climate, rainfall etc are in the good existence in sustainable condition. Whether it is private or public property, forest is the nationally and globally mutual treasure.

The major causes for deforestation of Adaba-Dodola Priority Forest Area are the expansion of agricultural farm, the commercialization of forest product almost by the whole community living inside and outside it. As a remedy, the IFMP started its operation as a pilot project with the intention of adopting the collaborative management between the community and the government, where the community takes part in the conservation process so that the authority and ownership right are permanently transferred to some identified members of community living within the forest.

The study was conducted on Adaba-Dodola Forest Priority Area, from February to May 2002. The general objective of this Thesis is to identify the major factors affecting people's participation in participatory forest management of Adaba-Dodola pilot project. Primary data are collected by face-to-face interview from sample population of WAJIB members using research instrument. Information was also gathered from district agriculture office and IFMP staffs for the purpose of getting preliminary idea but the response does not incorporated in the findings report. The interview covered 90 informants, which comprise about 20 percent out of the total WAJIB population size. Purposive, multi-stage stratified and systematic sampling methods have been employed in sample selection process.

It is found out that people positively perceive the WAJIB approach of PFM due to the fact that they proved there is a positive change in forest conservation, empowerment and accountability devolved upon them. Moreover, the WAJIB members are strongly participating in the forest management in idea sharing, planning, decision-making and controlling. This happened as a result of the privileges of ownership and use right granted to them by the agreement made with the regional government. The benefits they derive or expect to derive are also the driving force for such active WAJIBs' community participation. Moreover, awareness creation made about the gloomy side of deforestation, and the chance of the community to be displaced from the forest region by government force for the loss of forest stock, the homogeneity of the people living within the forest, and decision making power devolved towards the community (applying bottom-up approach) are some of the major encouraging factors in forest management.

On the other hand, in contrast to some research findings, which were carried-out in other area, land tenure; income difference and traditional or cultural value do not have impact on both participation and forest management activity. This reveals that the variables that affect people's participation are based on regional specific attributes.

Some of the factors that discourage participation are conflict/potential conflict/ arising between those WAJIB members who are granted the use right and non-WAJIB members of the community who are excluded from use right over the forest. Furthermore, the fear of losing their farm land, lack of incentives, weak legal actions taken on illegal users and doubt on project continuity are some of the hindrances mentioned by the informants. Most of such variables are directly or indirectly related to securing forest right.

Key Words: People's perception, participation, use right, exclusive right, awareness, bottom-up approach WAJIB, PFM, IFMP

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Concepts and Definitions

People's participation - refers to community involvement in forest management activity. These activities include taking part in planning, decision-making and controlling (i.e., patrol, protecting animals and illegal users, intruders, confiscation of illegally off-take forest product, taking illegal users to police and court).

Forest Block - a demarcated area within the territory of Adaba-Dodola Forest priority Area inhabited by a maximum of 30 recognized WAJIB members.

Level of participation - the degree/extent to which people involvement in forest management activities.

Perception - Views (positive or negative) of people towards WAJIB approach/PFM in forest management.

WAJIB members- all individuals who are registered and recognized as forest dwellers association.

WAJIB- approach - is a participatory approach where people secured an exclusive right on forest use and are responsible to manage it. Rights, duties and responsibilities have clearly defined.

Areas of people's participation- the area starts from inception of project activity to the monitoring stage of activities. Idea generation, planning, decision-making and implementation are areas where people involve. Implementation stage comprises activities such as nursery, plantation, and controlling/protecting.

Homogeneity- is the similarity of the community on the bases of economic (possession of wealth and occupational engagement), social (sex, education, culture or traditional life style), and traditional administrative mechanisms). Ethnicity, religion, birthplace, occupation, marital status etc. are some of the measures used in this research.

Land tenure- is the land holding system, which is defined by proclamation, rule and regulation of the government.

Forest tenure- is the forest holding system, which is defined by the rule and regulation with the regional government in the forest block allocation contract document.

Conflict- is the disagreement or dispute prevalence between WAJIB members and non-members due to the avoidance of the later group from using the forest and also a negative feeling of non-WAJIB members on those WAJIB members and the approach itself.

Use-right- refers to guaranteeing the right to use forest and forest product.

Exclusive right- refers to guarantying the users to have full right on forest. This includes the right to use, sell and transfer to third parties.

WAJIB members- all individuals who are registered and recognized as forest dwellers association in Adaba-Dodola FPAs.

People- in this context refers to communities that are involved in WAJIB approach/PFM activity.

Monetary Benefit-Cash income earned by WAJIB members out of forest product and other activities related to forest.

Abbreviations and Acronyms

CBNRM- Community Based Natural Resource Management

CSA- Central Statistical Authority

EPRDF- The Ethiopian Peoples Revolutionary Democratic Front

FAO - Food and Agriculture Organization of the United Nations

FODWA- Forest Dwellers Association

FPAs- Forest Priority Areas

GTZ-German Technical Cooperation

IFAD-International Fund for Agricultural Development

IFMP- Integrated Forest Management project

MOA- Ministry of Agriculture

NCS- National Conservation Strategy Secretariat

NGO- Non- Governmental Organization

NRM- Natural Resource Management

OED- World Operation Environment Department

PA- Peasant Association or Kebele administration

PFM- Participatory Forest Management

TGE-Transitional Government of Ethiopia

UNDP- United Nations Development Program

WAJIB- Waldaa Jiratota Bosonaa or FODWA

WB-World Bank

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I. Introduction

Land is one of the major natural resources that most nations' economic activity relies on. The direct or indirect dependence of human life on natural resource adversely affects the environment. Currently the high rate of population incremease with low rate of economic growth and technological change in less developed countries increased the consumption of renewable natural resource in excess of its regenerative capacity. Kirkby (1995:4) stated that while population rises by 100 million a year, earth's capacity to support human kind is reduced. According to him, two reasons are given for holding this pessimistic view: that resources are being consumed at an unsustainable rate and that resource is being degraded.

In less developed countries, the economic growth rate could not satisfy the increasing demand for goods and service to the additional population and human needs increment. Most of the societies do not have a chance to be engaged in other alternative economic sector rather they depend on activities that adversely affect natural resource such as extensive farming systems, animal rearing on marginal lands, and engaged on natural resource exploitation.

The world economy has been growing dramatically because of technological improvements. But such positive change is more likely concentrated in developed regions and some newly developing regions. On the other hand, the population growth rate particularly in underdeveloped regions is getting faster. In attachment with the population growth rate, the level of natural forest is declining in faster rate in Least Developed Countries like Ethiopia.

The severe deforestation rate is caused by social factor such as population growth, high illiteracy; institutional factors which are related to property right; economic factors such as level of poverty, lack of alternative employment opportunity and income generation schemes; and political factors related to structural change. The economical and institutional factors are the most and permanent factors that contribute for such unwise and unsustainable utilization of forest resource. As there is poor economic performance in the country, the society is dependent on nature, therefore, majority of the people are highly dependent on natural resources.

This is supplemented by undefined ownership on resource so that no one is responsible and accountable to it and any one can enjoy unwise usage of it. In Ethiopia the forest and other natural resources were transferred to the state property with the coming of the Derg regime. Consequently, the community developed wrong perception about forest ownership that it is the property of no one. This leads forest resource to be liable to a sort of open access. However, it witnessed that there has been unimaginable lose of the forest because public property seen as a common property which was considered as everybody's property.

Environmental degradation has become one of the major challenges to the world. Confirming this fact, Kirkby (1995:238) stated that,

> *Across the world, the environment is in peril. Forests are being stripped, stressed and burned. Natural habitats are vanishing. Deserts are advancing. Croplands suffer from water logging in some regions, overgrazing and salination in others. The atmosphere and ozone shields are under assault.*

The crisis of forest has a great impact on other resource; soil, climate and wild life are the major direct victims to deforestation. Ginjo (2000:32) stated that there are direct and closely interactive and reactive relationships among land tenures, vegetation cover, soil fertility and water run-off rates and related natural aspects and functions. According to Harrison in Breemer (1995:4), deforestation, degradation of the soil, and impoverishment of flora and fauna pose serious problems in large parts of Africa. Of all crises that struck African countries the environmental crisis is the most fundamental for the simple reason that in degraded environments development and human life is impossible.

Development is not possible without giving attention to the existence of natural resource. The World Bank defined development by incorporating natural conservation. It stated that development is any and all kinds of activities or process that increase the capacity of people or environment to meet human life (WB 1992c: 5). Moreover, Kirkby (1995:5) found that forests are probably important carbon sinks, reducing the effect of global warming; they are the homes of indigenous people; they are a protection against soil erosion and siltation of reservoirs; and they moderate the severity of floods; and are source of fuel wood.

As many literature shows that most of the forest clearance is from the local people themselves, since the close intact of local communities. To reduce the degree of

deforestation, many studies argued that the participation of local people is crucial in forest management. Breemer (1995:4) stated that because the environmental problems are growing beyond control of the state, an appeal to the local people has been made. They will have to reduce the exploitation intensity, protect and restore the vegetation cover in their vicinity and practice intensive and sustainable agriculture by means of innovation.

The World Bank (1992b: 93) reported that many environmental problems couldn't be solved without the active participation of local people. Accordingly, Breemer (1995:4) stated how participation could be accomplished. Participatory development approach to the field of local use and management of natural resources is that decision-making power and responsibilities should be entrusted to the local population, and they should have an important share in the benefits of their efforts.

Environmental problems in Africa have become so widespread and severe that any solution to them excluding consultation with and involvement of the rural population is unrealistic. He add rural communities must be allowed and encouraged to become responsible for the sustainable management of nature and natural resources on their own territories (Breemer 1995:97).

Adding to this argument, it stated that, ... sustainable development should be based on local-level solution derived from community initiatives (WB 1999:225). It advocated that as solutions a combination of government decentralization, devolution to local communities of responsibility (participation).

The approach comments that the local community should benefited from protection of the forest. According to World Bank, if local people are allowed to protected areas and to benefit from them, they are more likely to manage resources sustainabily (WB 1992b:112).

1.1 General Background of forest resource in Ethiopia

1.1.1 Ethiopia

Ethiopia has a total land area of 1,127,127 square kilometer. The total population is estimated to be 65,344,000 persons (Statistical Abstract 2000). According to Gemechu in Azene (1997:4), the country has 22.7 million tropical livestock units (largest in Africa) and 20.6

million of this (75 percent) is found in the high lands. Agriculture is the backbone of the economy.

According to Azene(1997:13), Ethiopia is rich in its flora and it is estimated to contain 6500-7000 species of higher plants of which about 125 are endemic. Ethiopia has the fifth largest flora in tropical Africa. In the country the major source of energy is from forest. Benze cited in Azene (1997:4) that the rural households account for about 93 percent of the total energy consumption in the country and 99.5 percent of their energy comes from bio-mass fuels such as fuel wood, twinges, leaves, charcoal, dung, and agricultural wastes.

In the highlands of Ethiopia as stated by Azene (1997:6) people's major economic activities are largely confined to cropping, livestock farming and forest manipulation whose misuses are strongly connected to the degradation of the land resources. About 60 percent of the most serious soil erosion occurs in the highlands.

The Ethiopian forest conservation /preservation defined as state-owned goes back to imperial times. In 1966, the council of ministers placed state forests under the Ministry of Agriculture (MoA). However, initiatives were restricted to delimiting areas, introducing forest guards, and limited tree planting, partly on a food-for work basis (Azene 1997:6).

The evolution of a sound forest policy has been drawn and the basis for guidance on forest management is a proclamation No. 192/1980, which clearly states that the conservation on natural forests and the development of all aspects of the forestry sub-sector is given high priority. The rural people should have the organizational structure as well as legal obligations and responsibilities to protect the forests from destruction and burning (Azene 1997: 83). This shows that it is the peasant association of government structure to be controlling and managing the forest in the territorial area.

The proclamation 1975 nationalized rural lands, and natural resource management officially became the primarily concern of socialist governments. State became a lawful manager of land and resource. But land redistribution and a reduced sense of ownership resulting from limited usufractual rights, led to the emergence of a severe sense of tenure insecurity. The farmers foresaw no possibility of gaining lawful access to the asset; they embarked on a whole scale deforestation of hillside plantations or natural forests (Yeraswork 2001:2).

In Ethiopia, environmental deterioration became more serious particularly in the period of the Military Government. The government followed a socialist path to development and hence the man-made forest lost the care and protection they received from their private owners; leading to a situation where people cut the trees for various uses as well as cleared land for farming. The resettlement and villagisation programs destroyed the forests and other vegetation in the endeavor to construct huts from trees and grass and to grow crops to meet the food requirements of settlers (Teferi 1999:358).

NCS (1994) noted that Ethiopia has shown an increase in land degradation and soil erosion over the last decade due to agricultural colonization of marginal lands. Approximately 17 percent of the potential agricultural GDP are being lost because of soil degradation. Soil fertility decline alone is causing a progressive annual loss in grain production of 40000 tones. Cropland crisis is expected to occur by the year 2017 when all potential cropland will be utilized. Furthermore, land degradation is estimated to have resulted in annual loss of livestock production by 1.1 million tropical livestock unit and unless arrested the reduction would rise to 2 million by 2010 or 10 percent of the national cattle herds (NCS cited in Azene 1997:4-5).

One of the study indicated that Ethiopia is found to be in the sever crisis. According to this study as it enters into 21st century, the country is in a real crisis: her development fulcrum within the problematic very much hinges between two axial poles- one of fast population growth rate and the other of accelerating environmental resource degradation. Both of these problems are accelerating mass poverty and destitution as causative factors but they themselves seem to be the twin products of poverty. Thus, their relationship is considered to be a spiral mess, whose elements are reinforcing each other (Singh 1999:295).

1.1.2 Oromia Region

Oromia covers an area of approximately 367,000 km^2. The region consists of 12 administrative Zones and about 180 woredes. The total population size of the region according to population and housing census (1994) is about 18,732,525 of which about 85 percent living in rural area dominantly engaged in agriculture. The CSA 1996 agricultural sample survey indicated that the number of livestock (in thousands) was 15132.52 cattle;

1208.55 sheep's, 3621.65 Goats; 631.51 horses; 1261.34 Asses, 79.20 mules and 9.46 camels.

The Forestry Conservation, Development and Utilisation Proclamation No.94/1994 under Article (3) stated the three types of forest ownership. These are State forest, Regional forest and Private forest. Hence forest resources are primarily owned and managed by the Regional Government and have environmental and economic objectives. The regional government owns almost all forest resources including natural high forests, woodlands and bush-lands, industrial and peri-urban plantations as well as community wood lot and catchments/ protection plantations. Article (6) the proclamation defines the obligations of private forest owners but does not articulate their right. Moreover, guideline is not issued either at Federal or Regional level on how and where a private investor can own and manage forest resources (Walia 1998: 30, Negarit Gazeta of the TGE 53rd year-No.80).

However, the draft forest policy of the country, which is issued in 1998, stated that *the right of ownership of individuals, organisations and associations who develop forest on their land, land obtained from the government or on concession will be ensured* (MoA 1998:7). The policy also set incentives, which the government can provide, to private investors who are involved in forest development.

The Natural high forest in Oromia is estimated to be 1.43 million ha. The natural high forests are being managed for protection and production purposes. In Bale Zone, the natural high forest constitutes 234,800 ha of land or 16 percent of the total natural high forest in the region (Walia 1998: 30).

The FPAs are widely used by local communities to meet their various needs (cultivating crops, grazing, cutting wood for fuel and building materials). Local communities consider forest management activities under taken by the Regional Government, within the FPAs, as an encroachment on their forest resources and land. Apparently, the Regional Government conservation, protection and production goals are in conflict with the needs of the local people (Walia 1998: 30).

1.2 Statement of the problem

Many literatures reveal that Ethiopia is endowed with natural forest of several species. It has registered that Ethiopia was once largely wooded land. At the turn of this country over 40 percent of the land area of Ethiopia was covered with dense Montane forests. But that uncontrolled utilization of forest resources has been resulted in over exploitation of the indigenous forest species and the problem has reached a critical stage. Vast area of Ethiopia's natural high forests have been degraded or deforested during the last 25 years, and the annual deforested area is estimated to be 163,600ha. The total forest cover has been reduced from 40 percent to just 3 percent over the 20th century. The National Forest Priority Area (NFPA) covers a total area of approximately 4.8 million-hectare (Berhanu 1993:31, IFMP 2000a: 2). Ethiopia had 15 percent of its landmasses covered with forests in 1955, and the figure was reduced to 3-4 percent by 1979. A total loss of forest is estimated to be 77 percent within 25 years. The 1990 Ethiopian forestry Action plan estimated forest cover to be only 2.7 percent (Alula 2001:9, Berhanu 1993: 31).).

In Oromia Region 50,00-100,000 ha of the existing natural forests are lost annually as a result of shifting cultivation land, clearing for subsistence and commercial agriculture, fuel wood, urbanization, forest fires and inefficient logging and utilization practices. Out of 58 Forest Priority Areas in Ethiopia, 37 (64%) are found in Oromia (Walia 1998: 29- 30)

Practical evidence shows that for great destruction of forest all over the country, political transition of government has a major role. According to Alula (2001:9), dramatic deforestation has been associated with political transitions from the Imperial to Derg regimes and especially from the latter to the EPRDF. The local communities whose livelihoods depend on lands and forests and living with the forest caused most of the deforestation in Ethiopia. The wide spread destruction of forests in many parts of the country during the year 1990-93, where the local population committed much of this deforestation themselves (Alula 2001:9). But both the past and current government of Ethiopia has been given low attention how this resource protected by local people.

As stated in IFMP (2000a: 11), landlords during the Emperor strictly controlled resource use and during the Derg regime rigorous repressive regulations had been in acted. However, the rules and regulations that the country designed could not halt forest destruction.

Despite the fact that settlement in state owned forest is illegal, inhabitants within FPA of Adaba-Dodola estimated over 20,000 people. The boundaries between the PAs in the forest area are not defined. In the intention of reducing the destruction of forest resources, numerous efforts were made by the government such as forest border demarcation, resettlement of people within and outside the forest into confined areas, establishing forest protection committees and check-points, confiscation of forest products, reforestation, preventing the use of selected indigenous tree species and the settlements in forest priority areas, and the ban of logging by the forest service could not reverse this trend (PFM 2002:2).

Evidence shows that about 40,000 households of the surrounding townships and villages at the project site depend on wood consumption from the forest. This has large contribution to the forest loss and which largely exceeds the production capacity. The plain is densely populated and heavily drains on the forest resources. Expansion of farmlands and pastures keeps reducing the forest cover. The number of livestock that seasonally graze inside the FPA can be estimated at 480,000. Thus, grazing keeps de-generating what remains of the forests or seasonal overgrazing by livestock hampers the natural tree regeneration. The patchwork of tree stands pastures and farm plots produces an estimated annual increment of $1m^3$ of standing volume per ha and a total area of about 53,000 ha. Excessive wood off-take (firewood, charcoal, lumber and fencing materials) is progressively degrading the remaining stands. A conservative estimate of the deforestation rate is in excess of 3 percent or 1,600 ha per year (Asfaw 1999: 1, PFM 2001:7, PFM 2002:2).

Current efforts and activities

The Federal Governments of Ethiopia understood that it is not possible to address the problem of deforestation in the country only with the effort of state without the involvement of the people who live with the forest. As stated in PFM (2002:2), the rapid deforestation of natural forests and environmental degradation in Ethiopia has forced forest conservation authorities to seek an alternative to conventional ways of forest conservation (law enforcement, awareness creation, mobilization, etc.) by realization that, unless the local community is involved in the conservation efforts, the forest will certainly disappear. Hence, the 1994 proclamation on Forest Conservation, Development and Utilization: "the sustainable utilization'' of the country's forest resources is possible through the participation of the people and benefit sharing by the concerned communities. Thus, the approach to participatory

forest management being developed by the IFMP aims to put this clause in to practice (IFMP2000a: 10, Negarit Gazeta of the TGE 53rd year-No.80).

Currently attempts changed from imposing rules, regulations or other means of enforcement to the involvement of the community in protecting and managing forest resources. The framework is a favorable condition to introduce participatory forest management (PFM) approach, which is recognized as *WAJIB (Waldaa Jiraatotaa Bosonaa*) in Oromo language substitute for *Forest dweller Association (FODWA*). The WAJIB model refers to the legal empowerment of local communities to manage forest resources sustainable for, in the first instance, their sustained livelihoods (basic needs) and in the second instance, economic returns. Integrated forest management project (IFMP) developed a " Vision" of a more holistic and systematic concept. The idea of participation is from the ground that local communities are the destructor and manager of their surrounding resources. In Ethiopia the WAJIB approach developed by IFMP which supports the transfer of forest ownership from the state to the community can be considered as a first milestone to transfer the responsibility for forest conservation from the state to the local population (IFMP 2000a: ii, Pop.4, IFMP 2001a: 10).

In line of this favorable condition, the IFMP of Adaba-Dodola project started in January 1995 and ended its first 3-years " Orientation" phase in December 1997. It is designed to contribute to the solution of the following core problem: "*unregulated access to the natural forest*". The overall goal of the project is enhancing the welfare of the people of Adaba-Dodola area through natural resources conservation. The project purpose (1998-2006) is that the conservation of the Adaba-Dodola Forest priority area is secured by an integrated and sustainable forest management taking in to consideration the interests of the local communities and the regions government as well as ecological aspects (IFMP 2000a: i, PFM 2002:1).

It is believed that rules, regulations and any other enforcement did not brought about any improvement towards the forest. After intensive consultations involving professionals at the local and regional level and other stakeholders, it reached on a mechanism where self-interest and self-organizing capacity of manageable groups would have to be relied on. On these bases a contract for allocating forest blocks to Forest Dwellers Association (WAJIB as it is known in the area), has been drafted, discussed and is approved both by regional government

forest management being developed by the IFMP aims to put this clause in to practice (IFMP2000a: 10, Negarit Gazeta of the TGE 53rd year-No.80).

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and the user groups. They can be expected to safeguard and sustainably manage their blocks. Granting of use rights to forest dweller groups goes along with other measures reinforcing the strategies, regulating access, making tree profitable and reducing pressure (PFM 2001:9).

In Ethiopia, one can easily observe that there are social, institutional and economic factors that contributed for forest resource damage. To mention some, level of education in the country is found to be at low level. Awareness of the people about problem come from forest destruction is very limited. As the majority of the societies are relied on natural resource the extent of poverty is in bad condition. Moreover, there is a widespread unemployment for the active age group particularly in rural Ethiopia. This may lead them to use forest as a source of income. To aggravate the situation, the modern source of energy is found to be at a very low level. Therefore, majority of the rural as well as urban dwellers use fuel wood and charcoal for energy consumption. The productivity of land and other resources is very poor. Thus, extensive farming is used than intensive farming to feed the highly growing population. The land and natural resource use policy has not explicitly addressed forest ownership, which fall the natural resource vulnerable to illegal exploitation. The forest tenure system in the country in general has effect on forest destruction. Moreover, because of the low technological development, the country could not substitute natural resource product by synthetic products. All the above social, economic and institutional problems added together directly or indirectly could affect the realization of PFM activities in the country.

The mission of The Integrated Forest Management Project (IFMP) of Adaba - Dodola natural high forest is to develop a feasible approach for the conservation of natural forest, which is within the implementation capacity of the community and the government. It is a pilot project to adopt the holistic approach in the conservation of forest through the participation of local people in the management of the forest on a sustainable base. The guiding principle of the WAJIB-approach is granting exclusive user rights to the WAJIB members (PFM 2002:1). However, there are deterring factors that affect the realization of the project objective. Moreover, adopting the same approach to the rest of natural forest and forests that are not delineated as high forest are practically with many difficulties.

1.3 Objective of the study

Given the deforestation problem and forest management, the main objective of the study is to examine institutional, economic and social factors determining people's participation in collective forest management by considering the experience of integrated forest management project Adaba-Dodola.

The specific objectives of the study:

- To identify areas in which WAJIB members participate in the forest management.
- Examine the perception of WAJIB members towards participatory forest management approach.
- To identify the major factors that can enhance WAJIB members' participation in participatory forest management activity.
- To identify the major factors that hinder WAJIB member's participation in participatory forest management activity.

1.4 Hypothesis

One can see from theoretical and practical evidence that any program of development approach will inevitably be encountered by a number of obstacles. By the same token, participatory approaches of development project in general and forest management in particular can be limited by many factors.

In carrying out this study, it can be hypothesized that,

- Most of the WAJIB members participating in forestry activities such as nursery development, plantation, controlling and harvesting trees.
- WAJIB members have a positive perception towards participatory forest management approach.
- Unless those WAJIB members' have given *exclusive right* on forest resources, their participation in forest management will be weak.
- Lack of community *awareness* about the advantages of forest and the consequence of forest destruction limits WAJIB members' involvement in forest management.

- If the benefit that WAJIB members gained from forest and forest product is attractive, WAJIB members are likely be active participants.
- *If the* composition of WAJIB members is *Heterogeneous* there will be weak participation by the group.
- Involving WAJIB members in all decision-making processes encourages their participation.

1.5 Significance of the study

The participatory forest management approach is a new concept in Ethiopia. Over a long period of time, forest resources were protected by rules and regulations from top-down approach. But it has not been minimizing the problem of deforestation or mining of the resource. By considering the unsuccessful classical approach, the Ethiopian government currently opened a room for decentralized approach i.e. community participation in forest management.

In Ethiopia the participatory forest management started at some forest priority areas in the country as a pilot project. These are:

- Adaba-Dodola Integrated Forest Management Project established in 1995 by the co-operation of Government of Ethiopia /regional agriculture bureau and GTZ.
- Borena Collaborative Forest Management Project by SOS Sahel initiative commenced in Jan 1999.
- GIS - WWF Ethiopia project, which started in mid August 1998.
- Farm Africa's working at Bonga and Chilimo Forest Priority Areas. The two projects were established in Oct. 1996 and in June 1996, respectively.

Since all these pilot projects have come to function very recently, it is difficult to see the impact of these pilot projects in reducing the deforestation problem in the country. So, it is highly important to study factors affecting peoples' participation in PFM activity of Adaba-Dodola, which could help to see the success and failure of the project itself and replicate this kind of collaborative forest management system. It may also be taken as a guide to the government policy on how to manage the forest on sustainable base. Moreover, this study

gives a highlight for the project to be designed in the future to involve the local people in planning and decision-making.

1.6 Limitation of the paper

In carrying out this study, there were many challenges that could be sighted. The major problem was related to financial constraints. The University allocated only 2000.00 Birr, which is very minimal to cover this kind of research, which needs field work. The financial constraints confined the data collection effort to the WAJIB members. As a result the information that could have been collected from the outsiders was not considered.

Thinking that the conductor of the study was either from government or from project owner (IFMP), the respondents tried to emphasize on their real problems that could not be related to forest management. As some of the individuals in the communities who were selected to respond the questionnaire have different living residences in different areas, it was difficult to get them easily. Thus the response of two individuals was missed out of 92 proposed respondents. Moreover, the level of perceptive and competence for answering the questionnaire by some respondents were low. However, the problem related to these would not be expected to bring significant change to the research outcome.

However, great attention has been given to the validity or quality of the information while data collection was going on. The conductor of the study managed the questionnaire with full involvement to minimize irresponsive result. While interviewing, the conductor of the study made detail oral discussion with the respondents in order to come with nearly actual information. Moreover, most of the references used in the paper are current information and research findings. It is thought to be the conclusion of this paper can work in most parts of the country particularly the central part, where the state has been the sole controller of the forest. This holds true till the forest is privatized or totally transferred to the community.

II. Description about the study area and the project

Adaba-Dodola is of one of the 38 Forest Priority Areas in the Oromia Region of Ethiopia. In the past the forest was privately owned by a number of landlords. In 1974 the forest was nationalized. In 1986 it was designed a state-owned FPA covering 140,000 ha. It covers some 500 square kilometers or 50,000 ha of mountain slopes. Its forest remnants cover part of the northern slopes of the Bale Mountains in the two districts of Adaba and Dodola. About 30 villages (so-called Peasant Associations) are more or less close to the forest. Three of the Peasant Association territories cover about one quarter of the area or 15,000 ha still considered being forest. These are Barisa, Bura-Adele and Danaba peasant association (Asfaw Mariame 1999: 1, PFM 2002:2).

2.1 Physical conditions of the area

Location. The project site is Adaba-Dodola, which is located in Bale zone, Oromia Region. This Forest Priority Area established in 1982 at a total area of 140,000 ha. By then it was named as Adaba-Dodola-Lajo Forest Priority Area. The Lajo part is deforested and converted to other land use system and the name of the priority area is renamed as Adaba-Dodola. The Adaba- Dodola natural high forest found adjacent to a tree less high plain Bale and Arsi Zone, that is intensively cropped and densely populated areas. According to Ministry of Agriculture, Adaba-Dodola forest is an integral part of the main Bale-Mountain forest. It is situated in the mountain range south of the Wabishebele River with Dodola in the West, Adaba in the middle and south and Lojo in the east. It is located at $38^0$55' - $39^0$40'east longitude and $6^0$40' - $7^0$05' north latitude (MoA:1, Abdurahiman 1999:4).

Population. The population of the two districts of Adaba and Dodola is about 200,000 persons or some 40,000 households. There are some 4000 households (or 20,000 people) inhabiting the remaining forest patches (IFMP 2000a: 4). These households satisfy the whole of their annual wood demands of approximately 2 m^3 from the forest.

Topography. The topography is rugged, made up of mountain chains. It consists of a range of hills on top of the continuous mountain landmass. The altitude ranges from 2500 – 3753 meter above sea level. It is the source of several streams, which are tributaries to the Wabi-Shebele river. It is the most important source of water for the Melka-Wakene hydroelectric

dam. 80 percent of the total area has slopes of less than 20^0, 40 percent of total has slopes less than 3^0 (MoA:1).

Climate. The climate is cool in the mountain range, and warmer in the lower valleys. The mean annual temperature ranges from 15^0 c to 25^0c. The mean annual rainfall is 1000mm with two peaks, one during February/March, and the other from June-September (MoA:1).

Soil. The soil is volcanic in origin, mainly from alkali basalt and tugs and generally of well-structured silt or clay-loam of more than one-meter depth on the gentle slopes, in the valleys and depressions. It is generally shallow on slopes and on top of hills whereby rocky outcrops are regularly observed. The color is reddish brown, well drained and of medium texture. If forest cover is removed, erosion can be expected (MoA:1).

Forest types and species. The Adaba Dodola forest is one of the last remnants of afro-montane, dry evergreen coniferous forests in the country, which makes it a unique source of species diversity. Vegetation cover is very heterogeneous. Above 2700 m Hagenia forest, between 2300 – 2700 juniperus forest. In the lower sections (steep and moist valleys) also Podocarpus forest. Juniperus procera, podocarpus facatus, Hypericum lanceolatum, Erica arbora, Aiophylus abyssinicus and maytenus addat and Hagenia abyssinica are the main indigenous tree species. Some other tree species include: Maytenus, Allophylus, Olea, Prunus, Schefflera. Some small trees: Rapnea,melanophloeos, Bersama, Dombeya, Ekebergia, Ilax, Lepidotrichilia, Olinia and Hypericum. The average tree cover is about 50 percent (MoA:2, PFM 2002:2, PFM 2001:7).

The Economy. A particular feature of the Adaba-Dodola forest area is its quite homogenous occupancy by livestock dependent farmers**.** The forest dwellers mainly depend on animal husbandry. Crop production plays a minor role in their livelihood. Within the forest zone, the importance of livestock grows with rising altitude. Open spaces at the forest edge are mostly used for wheat cultivation; the coverage of barley fields in the mountains is much less. Instead, grazing livestock is highly prevalent. In some areas there are *enset* plantations (edible plant) around homesteads (Popp. 4, IFMP 2000a: 4, Asfaw 1994:1). It is observed that the livelihood of the majority of the WAJIB members is dependant on mixed farm, which constitutes farming outside the forest area and animal husbandry.

Forest product is also a source of income in this area. According to PFM report, small-scale commercialization of forest product by the local people in local markets is a routine activity. Some 200,000 people depend on earning their living from the forest of Adaba-Dodola (PFM 2002:2).

The farming system is mainly characterized by the presence of subsistence mixed farming of both livestock and agricultural crop production. There are also many households engaged in collecting and selling forest products from this forest (Terefe 2002:15). The main sources of income for the local communities are selling of crop, livestock and forest products obtained from natural forests. Moreover, some farmers are now working with off-farm activities such as guides to tourist sites, renting horses to tourists and serving in the tourist huts, which were built by the project for the purpose of income generation for local communities (Terefe 2002:16).

2.2 Background of the Integrated Forest Management Project Adaba-Dodola

The Adaba-Dodola high forest stayed for a long period of time without specified ownership since the coming of Derg to power in the name of *all high forest and land must controlled by the state*. This resulted severe destruction of forest with illegal users. In the very recent time, the existing government understood that forest exploitation couldn't be reduced unless the local communities take part in the management process of the resource.

Even though the high forest is under the control of the state; there is a room for co-management with the society living within the forest. The controlling of forest by the state could not solve the problem of high deforestation; it rather accelerates the deforestation rate. The major reason could be the hierarchical management system from central government institution such as Ministry of Agriculture to Kebele Administration. This hierarchy is very procedural so as to decrease the sense of ownership right, accountability or responsibility to protect or manage the forest. Majority of the community consider the forest and other natural resource, which have no clearly defined the owner as a state property, which is a common property of the public, but practically it is the no ones' property. Having this general background, the IFMP in the Adaba-Dodola forest involved people in controlling and sharing benefit of the forest in the co-management approach.

The Integrated Forest management project Adaba-Dodola IFMP has been operating since 1995. The IFMP is a bilateral technical cooperation project of the governments of Ethiopia and Germany with the objective of developing a feasible forest conservation approach for the Adaba-Dodola forest in the Bale zone of the Oromia Region. The project ended its two 3-year phases, the first pilot and second implementation phases in December 1997 and 2000 respectively. Many workshops conducted during 1998 involving regional, zonal, local and rural target groups for the project mission to be seized and approved. Then consensus on how to go about conservation was progressively developed. In May 1999, a workshop on adaptive re-planning was conducted. The objective for that phase was maintained "*consolidate a replicable model of participatory, integrated and sustainable forest management for RFPA with the required outputs or results*". The vision of the project is that, instead of counting on mobilization and enforcement, it is self-interest and self-organizing capacity that should be relied on. This is more holistic and systematic approach used (PFM 2001:7, PFM 2002:1,IFMP, IFMP 1999b:1, and IFMP 2002a:ii).

During the pilot phase (1995-1997), the project conducted forest inventories, land use surveys and baseline studies in 3 pilot villages. The project put considerable efforts into activities such as awareness creation, mobilization, confiscation, encouraging forest protection committees to confiscate cross-cut saws and conduct patrolling, subsidizing enrichment planting and area closure, licensing of pit sawing. It also supported extensive village development activities, income generation, planting and fencing of regeneration areas to gain the confidence of the rural population (IFMP 1999a:i, PFM 2002:3).

The project proved that the all effort made resulted insignificant output. So that it recognized that the absence of a clear mission that is agreed up on by all the stakeholders is a major constraint to achieve participatory forestry. Hence, in April 1998 IFMP defined its mission to develop feasible forest conservation. Thus, the second phase focused on the project mission of developing a feasible approach in the forest conservation. During this period, a consensus on the vision was reached at all the required levels (administrative, institutional and community). Negotiation with the forest and village administrations as well as the forest dwellers on the necessary technical and legal details of specific contractual terms have been made currently it is on implementation stage (IFMP 1999a:i, PFM 2002:3).

The principle of this approach is that the forest benefits made available to the community can include rights to forest products for subsistence use such as fuel wood for cooking, timber for house construction or farm tools, fibers, herbs, spices and many other products. It includes grazing or hanging hives. The community may benefit from the right to sell certain forest products or to receive a share of forest revenue from timber sold by the government or a combination of all these benefits (PFM 2001:3)

Even though the Adaba-Dodola PFAs tried to protect forest in sustainable basis through classical means of state control. It stated that:

> *After trying different" classical " approaches of forest conservation such as guarding, confiscating, setting up village- based protection committees, rules and regulations defined by the village communities etc...., which all remained without impact on forest conservation. The last resort was seen in forest dwellers safeguarding the natural forest. They are in the best position to keep out intruders (humans and livestock)* (Popp.4; IFMP1999a:i, PFM 2002:2).

But the community had no part and parcel in decision on the forest management. Rather the community lost the traditional ownership right on their own surrounding resources. Some of them were serving as a forest guard, which is enforced by the government in its top-down approach of giving order and duty. However, these measures brought no good to the forest protection and development. Therefore, the government of Ethiopia and the regional state admitted the problem so that community involvements become critical.

It is stated in the Oromia Regional Conservation strategy (1998 draft) that:

> *The non-participation of communities in ownership, management and revenue sharing of natural forests renders their development and protection unsustainable. The current policy type operation of the government has been found ineffective and demoralizing. A mechanism where by the surrounding communities participate in the protection and ownership of these forests need to be designed* (IFMP 2000a:22).

The best bet for Adaba-Dodola seems to be the allocation of forest blocks to forest dweller groups. The principle would be the same as the one in practice for allocating agricultural land to farmers. The forest users are not forest owners. Rather they are granted the exclusive long-

term right of using the sustainable incremental yield of the leased forestland. Granting of use rights to forest dweller groups will have to go along with other measures that re-enforcing the strategy. Law-enforcement will have to come in for securing the rights of the forest dwellers (Asfaw 1999: 2)

The first WAJIB group was established in June 2000. To date 17 WAJIB groups comprising 461 members in two PAs, namely Barisa and Deneba have concluded the contract with the forest administration to administer a total of 6,810 ha of land. Preparations are underway to establish 22 WAJIB groups in Bure-Adele PA comprising 658 members. According IFMP survey, the average household size of Barisa, Bura-Adele and Danaba peasant association is 7, 9, and 6 persons respectively. Similarly, the farmland size per family is 3.1, 1.5, and 1.5 ha for Barisa, Bura-Adele and Danaba, respectively. Forest/family head is 3.40, 9.75, and 9.05 ha for Barisa, Bura-Adele and Danaba, respectively (PFM 2002:4, IFMP 2000a: 17).

In order to provide a binding agreement of Forest Block Allocation Contract (FBAC) agreement has been elaborated by the project, which defines the rights and duties of the forest administration and the forest dwellers. Based on this contract signed with the regional government, currently the members in the first 2 PAs have received the power and responsibilities of managing the forest. The WAJIB-approach has granted exclusive right to the community. Forest dwellers became caretakers of the natural forest. The FPA in a given PA is subdivided into so-called "forest block" with an average size of 360 ha. Each block is managed by a WAJIB group of not more than 30 members based on the calculation of a carrying capacity of 12 ha per homestead. Some of 30 families form an association and are granted collective, exclusive use right for a forest block of about 400 hectare's. They can farm, keep livestock, use or sell forest products (PFM 2002:3).

According to the rights and duties of the WAJIB members as indicated in FBAC the settlement in the forest block and utilization of forest products for both domestic and commercial purposes are ensured. The duties of WAJIB members include restricting settlements to the agreed number of homesteads, maintaining the tree cover, paying forest rent and regulating forest use (PFM 2002:3).

III. Review of the Literature

3.1 Deforestation and the extent of the problem

The ongoing deforestation particularly in developing countries is the worry of world community because its consequence is dangerous to all the countries. It is indicated that according to FAO estimate, Africa's 6.5 million km^2 of forest area in 1980 had shrunk to 6 million km^2 by 1990, loosing about 51,000 km^2 annually. The threat of deforestation varies widely between regions but is most serious in the densely populated areas of Western, East and Southern Africa (Gaffar et al 1998:10).

Africa closed forests are being cleared at an annual rate of 0.8 percent a year. The fastest rate of deforestation is occurring in West Africa where 4 percent of closed forest is being razed each year. For example the scale of forest depletion has become critical in many African countries. It is estimated that the following have already lost over 80 percent of their total forests: Burkina Faso, Burundi, Chad, Ethiopia, Gambia, Ghana, Guinea-Bissau, Liberia, Mauritania, Niger, Rwanda, Senegal and Sierra-Leon (Gaffar et al 1998:10).

According to Repetto (1989: 6), over 4 million hectares of Virgin tropical forests are harvested each year, becoming "secondary" forest. In countries of the Sahelian/Sudanian Zone in Africa, for example, consumption now exceeds natural regeneration by 70 percent in Sudan, 75 percent in northern Nigeria, 150 percent in Ethiopia, and 200 percent in Niger.

The Word Bank (1991:5) study indicated that nearly 500 million people depend on forests for their livelihood. This results according to the report, 17 million to 20 million hectares of forests are being lost every year, mainly in developing countries, losses to tropical forests are now estimated at about one percent a year - clearly not a sustainable level use. Similar study reported in Population Report (1992:15) tropical forests are vanishing at an estimated rate of 17 million hectares annually. Asia is losing its forests fastest at a rate of 1.2 percent annually, while Latin America is losing 0.9 percent annually, and Africa, 0.8 percent.

Another studies shows that the annual tropical forest loss estimated to be over 20 million hectares - a staggering 55,000 hectares per day. According to the study, at the current rates of

tropical deforestation, all intact tropical forest will be lost in the next century (Serageldin 1990: iii).

Tropical regions, including Sub-Saharan Africa, face a series of severe environmental problems, which jeopardize the well being of individuals, populations, and even entire regional ecosystems. Through deforestation, Africa is losing between three and five million hectares of tropical forest each year (Serageldin 1990: iii).

Deforestation is a major issue in Ethiopia, which needs a great effort by the government and the community at large. It is one of the main causes for the prevailing land degradation via soil erosion. It is caused by cutting of trees to secure more land for cultivation, for use as fuel wood, which constitutes 94.8 percent of the total energy consumption in Ethiopia, for production of charcoal and neglect as well as wanton destruction such as by fire. As the study shows these types of deforestation have been increasing in the last two to three decades, a period in which security of land tenure and access to natural resources were undermined by unfavorable policy measures for forests (Teferi 1999:359).

In addition to agricultural land expansion, as it stated in Teferi (1999:359), the most leading factors for high deforestation is using biomass as a source of energy in the country. A 1984 estimate indicated that 94.8 percent of the total energy consumption in Ethiopia was made up of biomass fuels consisting of fuel wood, animal dung and crop residue. Fuel wood use makes up 81.1 percent of these traditional sources, while animal dung and crop residue makes up 9.4 and 8.4 percent respectively. Traditional fuels make up 99.9 percent of the rural energy consumption and the rural population consumes 86.7 percent of the total net energy. Thus he concluded that environmental problems are caused by the imbalance between demand for resource and supply of available resource.

3.2 Causes of Deforestation

The alarming increase in deforestation rate in tropical and other third world regions are caused by overexploitation and itinerant slash and burn, shifting peasant agriculture, expansion of agricultural lands, the conversion of forest to pasture, the expansion of certain agro-export crops, uncontrolled logging activities for timber production, fuel wood gathering and urbanization (Utting 1993:4, Ghaffar et al 1998:10, Ginjo 2000:32). For instance in Brazil, the three major pressures on forest are unsustainable logging, agricultural expansion

due to land extensive agricultural activities and development particularly road (OED 2000:17). Rapid population growth is often posited as one of the major forces resulting in increased pressure on the natural resource base, which in turn, results in deforestation. Utting (1993:4) argued up on which agents are directly involved in cutting down trees but according to him, the primary causes for such exploitation of forest resource are, the appropriateness of land-use patterns, the underlying social forces, which determine such patterns, and the question of who, if any one, is to blame. He raises questions,

> *Are peasants at fault because they are clearing and burning large areas of forest or are they the victims of a particular socio-economic system which has made access to land and other resources in areas of greater agricultural potential increasingly difficult? Do government policies that encourage colonization and cattle rising in rain forests areas help or hinder the development process?* (Utting 1993:4).

Such questions implicitly tell us farmers are not clearing and burning forest for they are the actors in damaging resource, but because they are the victim of social and economic crises in the society which contribute for their damaging the resource. In the case of Adaba-Dodola high forest, the major factors for deforestation are the transfer of private ownership to the state; rapid population growth; agricultural expansion; absence of community involvement; unstable institutional arrangement; and weak government institutions (PFM 2002:2).

3.2.1 Poverty and Environmental Degradation nexus

World poverty remains a main cause and effect of environmental degradation. According to The European Journal (1991: 33) those who are poor will continue to destroy their immediate environment in order to survive. Their livestock will overgraze grasslands, they will overuse marginal land, and they will crowd in to congested cities in ever growing numbers. Gaffar and et al (1998:13) noted that poverty leads to environmental degradation, and that the latter hits the poor hardest, leads to their further impoverishment and actually undermines the very basis of their livelihoods. Thus he stated that attempting to protect the African environment halt environmental degradation without addressing the problem of poverty is an exercise in futility. Only through human-centered, sustained and environmentally sustainable development strategy can both crises be adequately dealt with, and can the vicious interactions between poverty and environmental damage be arrested. Combining production

and productivity enhancing and poverty alleviating approaches with conservation-oriented approaches would relieve the pressure that usually forces the poor to overexploit their fragile and limited resource base and also help to conserve it.

The relation ship between poverty and environment explained as follows,

> *The poor are characterized by illiteracy, disease, hunger, low productivity, and limited invisible surplus. They are dependent for their livelihood on traditional agricultural and livestock management practices, which are labor intensive and sustenance-oriented. Existing land tenure systems also tend to discriminate against the poor, thereby restricting their accessibility to productive land and pushing them to more marginal areas. Where, in their struggle for survival, they often destroy the environment with a long-term loss through overstocking, overgrazing, over-cultivation and indiscriminate cutting down of trees. Their shortening fallow on steep slopes and fragile soils induce erosion. Their need for off-season incomes drives them to cut and sell firewood and to make and sell charcoal (Gaffar and et al 1998:13, Barbier 1991:1). It also stated that alleviating poverty is both a moral imperative and prerequisite for environmental sustainability. Poor families often lack the resources to avoid degrading their environment and are preoccupied with day-to-day survival. The poor are both victims and agents of environmental damage (WB1992b:30).*

In most cases the opportunity of poor people in the economic activity is limited, they resort to the resource which is found to be near by them and whose ownership is not clearly defined or the owner of the common especially forest and fishery resource.

According to World Bank report, the poor have traditionally taken the brunt of the blame for causing societies many problems. The most recent accusation directed against them is that they cause environmental degradation. The general consensus seems to be that poverty is a major cause of environmental degradation.... Poverty is major cause of environmental problems and amelioration of poverty is a necessary and central condition of effective program to deal with environmental concerns.... Environmental degradation, rapid population growth and stagnant production are closely linked with the fast spread of acute poverty in many countries of Asia...poor families who have to meet short term needs mine

the national capacity by excessive cutting of trees for firewood and failure to replace soil nutrients (WB1998a: 2169).

Another study, which were conducted in Africa shows that the major cause of the deteriorating environment is the increasing number of poor people, who in effect mine the land to produce their crops and feed their livestock. They have often been blamed for land degradation as if they had a choice of resources to depend on for their livelihood when really they do not. They are too poor to adopt simple innovations, to add organic or inorganic fertilizer and to undertake soil and water conservation, etc. It is poverty that is responsible for the destruction of the environment and not the poor. Poverty at all levels of society establishes a vicious cycle of poverty- inappropriate methods of exploitation of environmental resources, degradation of the environment, low productivity and poverty (Gyasi 1997:17).

On the other hand it had been argued that, a more complex set of variables come into play and the simple generalizations of this multidimensional problem related to forest are often erroneous and missed many important points. Accordingly demographic, cultural, and institutional factors are important variables in the poverty- environmental degradation nexus (Gyasi 1997:17). It is recommended that institutional and market failures must be corrected in order to reduce the degrading power of the wealthy society.

3.2.2 Population and Environmental Degradation nexus

Population growth should not be always considered as the cause of natural resource depletion but also seen as actor in resource development. According to Research Observer (1995:87) deforestation rates may increase because the population is growing and needs more land for food, fuel wood, fiber, or other forest products. However, population growth may also induce technological progress and institutional changes that contributes to reduced pressures on forests.

One of the study indicated that, population growth poses a considerable threat to bio-diversity through its indirect effect on deforestation. Because most land suitable for crop production is now inhabited, population growth will lead to the destruction of forests and other sensitive areas, such as hillsides, semiarid regions, and coastal zones. Growing rural populations are forced on to erosion-prone hill farms, deeper into semiarid regions with inadequate rainfall for continuous cultivation, or into tropical forests with poor, easily leached lateritic soils.

However, the study also indicated that, many other factors such as land tenure, subsidies for deforestation, and economy-wide policies are also primary causes for deforestation (Gyasi 1997:64, PDR 1983:610).

It has been indicated that population pressures contribute directly to deforestation. With in the forests, forest peoples traditionally have made their living by slash - and - burn, or shifting, cultivation. They also contribute to deforestation by increasing the demand for fuel-wood, on which one-half to two-thirds of the world's people depend for heating and cooking (WB 1991:1).

It argued that the severe destruction of forest is the question of survival. Growing rural populations invade the forests in search of land for their crops, fuel for cooking and fodder for their animals. Around 90 percent of people in the less developed countries depend on wood as their main source of fuel, and severe deficits of fuel wood supplies have already been experienced, especially in semi-arid areas (Mather 1987:6, Repetto, 1989: 2)

In general, there is strong debate on the interlinkage of population growth and environment. There are three main school of thought holding alternative perspectives on population according to Kirkby (1995:108). The first perspective believes that more people have no problem. According to this school, in industrial countries, additional people stimulate higher productivity. It also argued that, growing population in the Third World countries have a positive net effect on the general standard of living apparent only in the long term. Productivity will be raised not only through economies of scale and larger markets, but also through the addition of more people's contributions to knowledge and technical progress. In fact this argument has criticized. The second one is people versus resource perspective, which argued that people are pitted against finite resources and we are fast overrunning the earth's capacity to support us. According to this view, current environmental degradation and hunger suggest that in some places we have already pushed beyond the earth's limits. ...many people that fast-growing populations meant that we had reached the earth's limits to feed people. The battle to feed all of humanity is over. The third view is the social perspective. This view presents a powerful challenge to the people-versus -resource view in which growing populations deplete per-capita resources, leading to hunger and environmental degradation. According to social perspective it is the realities of poverty that lead to both

rapid population growth and hunger. High fertility becomes an effect more than a cause of poverty and hunger.

The study indicated in case of agriculture, increased population would frequently lead to new technologies that allow for greater productivity without necessarily damaging the land. But in some situations according to the study, new technologies cannot be affordable or easy to apply. In large areas of Africa, increased use of land once allowed to lie fallow for several years has led directly to deforestation, loss of species, loss of soil fertility and increased erosion (Kirkby 1995.116).

It stated that population pressure contributes to the deterioration and depletion of important natural resources in developing countries. According to population report, growing rural populations and rising subsistence demands have resulted in the expansion of cultivation onto increasingly marginal soils and have shortened periods of fallow, leading to erosion and the loss of soil fertility. The searches for more fodder and forage for livestock, more fuel wood for cooking and new lands to farm have reduced forested areas (Population and Development 1983:609).

By combining the relationship between poverty and population growth, Singh (1999:297) reached a conclusion that not only poverty and fast population growth rate should not be blamed for environmental degradation. He stated that

> *The problem of deteriorating developmental resources and environmental degradation in developing countries are complex consequences of highly exploitative global, regional and even intra-state politico-economic developments, created through highly discriminative "development" technologies and politico-economic and social engineering which essentially marginalize and impoverish the majority of the people while enriching a favored minority at each spatial scale. As a consequence, the poor not only are forced to lead a sub-human life, but also to mine "locally" the environmental resources which essentially provide for their life support and* genres de vie. *While the rich exploit the local as well global resources and degrade them, they make strategic please to not only blame the poor but also to collect resources from them to resurrect the degraded environment. It is highly unethical and unsustainable stand: poverty and equity issues are the crux of the problematic and must be dealt with justifiably though suitable adaptive behavior* (Singh 1999:297*).*

This implies that not only poor people and population growth are the major factor for environment problem but also economic, political and social factors that contributed for the poor people depend only on natural resource just near to them. It also believed that the rich have access to consume natural resource out of their environs so that they should be blamed to the problem also.

3.3 Consequence of deforestation

As a result of deforestation unimaginable problems would arise. The most and direct effect of deforestation is land degradation and desertification. According to Gaffar, 34 percent of Africa is now under the threat of desertification and more than 80 percent of Africa's dry lands are moderately or severely decertified. A 1984 survey of desertification trends estimated that as much as 742 million hectares in Africa 26 of total land area and more than 85 percent of the dry land area was undergoing moderate to sever desertification. A total of 108 million people lived in the affected zones in 1983 with 61 million people in areas undergoing sever desertification. This process has accelerated the poor management of semi-arid zones, population pressures, and adverse human impact and sever widespread poverty conditions. To make matters worse, prolonged and extended drought has become a recurrent phenomenon with devastating impact on lives, agriculture and land; sediments in many Africa rivers are increasing roughly one and a half times as fast as population in their catchment areas; the utilization of marginal land and soil erosion and degradation ... (Gaffar and et al 1998:11).

Moreover, according to population report, the adverse consequences of deforestation are erosion, siltation, and flooding in river basins, changes in microclimate, and loss of habitat (Population and Development 1983:609).

In the case of Ethiopia the most challenging situation for the country as whole, particularly, highland areas are land degradation or loss of land fertility due to soil erosion. Most of the economic activity directly or indirectly depends on backward agriculture. The productivity of land that satisfies the demand for food and necessary produce for industry and export is depending on the fertility of land. Land degradation and the occurrence of drought are the two major challenges to the country production and productivity. According to Teferi (1999:356) survey result, the major cause of land degradation in Ethiopia is soil erosion,

which nearly one billion tones per year in the country's highlands. This is primarily due to human activities, particularly overgrazing, over-cultivation and deforestation. Over 4 percent of the country's land areas has lost its ability to produce food and over 70 percent have been seriously eroded. Accordingly, many researchers accept that over 10 million people will not be able to produce food from their lands by the year 2010. If erosion rates stay at current level, it is projected that land covered by soil less than 10 cm deep - i.e., incapable of sustaining cropping- will increase to about 18 percent of Ethiopian highlands by the same year. It indicated also that about half of the highland area is significantly eroded and over one fourth is severely eroded, 13 million hectares, are moderately eroded and 2 million hectares have practically lost the minimum soil cover needed to produce crops (Tegegn 1994; Shibru 1997 cited in Teferi 1999:356).

The direct impact of the forest destruction in Ethiopia was the creation of a wide gap between supply and demand for fuel wood, construction materials, timber and other forest products and further disappearance of the flora and fauna of the country. Indirectly, this has brought about a change in climate and the soil is exposed to desiccation and erosion. Consequently, this will lead to reduce land productivity (Berhanu 1993:81).

3.4 Participatory forest management

3.4.1 Definition

Participation is basically a political process concerned with redistribution of power in a society. This usually involves transfer of administrative and financial powers from 'haves' to "haves not" and sharing of technical and legal information with the local people whose participation is sought (Singh-1992).

According to Banki cited in Singh (1992:4), people's participation is a dynamic group process in which all members of a group contribute to the attainment of group objectives, share the benefits from group activities, exchange information and experience of common interests, and follow the rules, regulations and other decisions made by the group.

Participation is shared understanding and empowerment leading to joint decision-making. It starts with consultation, moves to negotiation (of problems solutions approaches) and ends with decision-making and action (IFAD 2001:10). According to UNESCO document in

Matura (1986:21), participation defined as a collective sustained activity for the purpose of achieving some common objectives, especially a more equitable distribution of the benefits of development.

Local participation is defined as empowering people to mobilize their own capacities, be social actors rather than passive subjects, manage the resources, make decisions, and control the activities that affect their lives (Brandon 1993:160).

Participatory approaches to forestry often aim at devolving decision making over and benefits from forest to rural populations; along with responsibilities for forest management. Such devolution is predicted on a number of assumptions about higher efficiency of local resources management due to greater local knowledge, lower transaction costs due to proximity to forests, better decision making due to the internalization of social and ecological costs (such as the loss of subsistence foods, fodder and game) into commercial forest decisions etc (WD 23/9: 1588).

3.4.2 Historical Development of Participatory Forest Management

Participation has increased in popularity since the 1970s, when it grew out of the concern for meeting basic needs and reaching the poorest of the poor. Today the concept has taken on the characteristics of a panacea, academic studies and policy statements lauding the benefits of participation have made it one of the most widely used concepts in development (WB 1998a:2105).

Public agitation for community-based forest/ natural resource management has its roots, in most African countries, in the repressive natural resource Laws from their colonial past. The forest Laws that came to be applied in the post-colonial era alienated local communities' right to claim ownership of forests. Licenses and other forms of taxation, previously unknown to the communities, were introduced to control the exploitation of produce that used to be freely accessible to them for domestic and commercial use (FAO 2000: 8).

As populations and the demands for agricultural land increased, and the financial needs of the newly independent countries increased as a result of heightened demand for social, infrastructures and general economic development, the laws governing the management and exploitation of natural resources were made more stringent to permit the governments to

maximize revenue from these resources. Development in the private sector provided governments with an opportunity to increase revenue from natural resources through commercialization of products. The royalties and license fees that were introduced were beyond the means of the local communities. As a result, mainly outsiders involved in natural resource business, who had the financial means to pay the taxes, accessed the resources at the economic, cultural and spiritual expense of the communities settled close to them (FAO 2000: 8).

The business community, which was profit-oriented, did not concern itself with sustainable exploitation, and the governments did not see the need, or have the capacity and experience, to enforce sustainable practices of exploitation. Communities therefore often adopted a nonchalant attitude to both the governments' approach to forest management and to the forest itself, resulting in the latter's deterioration. As communities began to witness the disappearance of their hitherto valued forests, and the associated traditional, social, spiritual and local economic values that they attached to them, some communities took it up on themselves to protect them against fires and illegal cutting (FAO 2000: 8).

These attempts did not have much impact on reversing the degradation of the forests, not so much due to lack of financial resources as to an absence of legal empowerment. The communities therefore began to call for a return of their forestlands and their empowerment to manage them. At about the same time, the governments themselves began to face difficult situations in which the relative revenue-generating capacity of the forest resources diminished as a result of inefficient revenue collection methods, declining forest resources, and increased population pressure on forest areas for farming and corruption. Soil productivity declined, threatening food self-sufficiency and food security, and drought and desertification threats escalated (FAO 2000: 8).

The emergence of the international debate on tropical forests brought a new orientation to forest management in the tropics. The contribution of forest resources to the wider context of sustainable economic and environmental development began to gain international recognition. Similarly, international attention came to focus on sustainable management and utilization in relation to the contribution of forests to the socio-economic development of the communities settled around them. A variety of conceptual approaches therefore emerged, such as integrated forest management (IFM), joint forest management, collaborative forest

management, and forestry for rural development. In the IFM approach, emphasis was placed on the integration of other economic and social functions of the forest in management activities, local value-added orientation, and the association and active involvement of other stakeholder as partners both in the management and conservation of forests and in benefit sharing. The joint and collaborative management approaches recognized the need for stakeholder involvement in order to achieve sustainable development (FAO 2000: 8).

3.4.3 The Rational of people's participation

Many literatures indicated the importance and rationality behind people's participation in forest management. Serageldine (1990:10) described that the role of local people in managing natural resource is the most valuable instrument in most developing countries since 1980s. The concept becoming prominent because it proved that ignoring local communities in resource management and exercising the controlling mechanisms by government institution resulted resource exploitation; and at the same time government alone cannot guard the resource without the help of communities living with the resource. He described, because local communities have not been allowed or encouraged to participate in conservation activities- the forests are condemned to destruction. Clearly, government alone is incapable of managing and protecting such large areas.

IFAD (2001:10) mentioned some of the most important role of participation of beneficiaries as follows:

- To ensure that project design reflects the real priorities of beneficiaries and is relevant and feasible from their point of view;
- To ensure that the project is reaching, and listening to the voices of the people it targets;
- To increase ownership, ownership motivation and ultimately sustainability;
- To make the project accountable to beneficiaries;
- To generate learning;
- To facilitate advocacy at the top (partnerships) and at the bottom (by demanding political entitlement); and
- To provide early warning on emergent problems.

By the same token, Oliver in Ginjo (2000:35), underlines three comparative advantages of community involvement in local natural resource management; first, higher degree of sustainability will be ensured when the community members identify themselves with conservation and management strategies through direct involvement as opposed to top-down

approaches. Second, the community will observe and appreciate the desirable link between environment and development. Thirdly, the dependency on external resources will be minimized and local people will take their own initiatives in the management and conservation of natural resources.

It is argued that it is much indispensable for the poor to participate fully and effectively if development is to be achieved, it is equally indispensable for the people to be fully involved if the environment to be safeguarded. Thus, effective popular participation by the people and their institutions in poverty alleviation and resource conservation initiatives are essential pre-requisites for success in the achievement of both local communities and traditional users are quite capable of the balanced use of natural resources if given the right to controlled exploitation and use, linked to clearly delineated responsibilities for conservation (Gaffar 1998:14).

The World Bank argued that participation is crucial to the success of projects, it can transform development, it empowers poor people, etc. It looked in two perspectives. One is from planner centered and the other from people centered. From former perspective there will be administrative and financial efficiency. The motivation for popular participation is that beneficiary involvement makes projects more likely to succeed in meeting their objectives; local people participation in project planning and implementation make them more committed to its success. Participation facilitates local people's acceptance of new policies and technologies promoted by outsiders. Through participation, indigenous knowledge can be exploited and local labor, financial, and in-kind contributions can lower the implementation costs. In the people- centered perspective, participation is both a means and end in itself. It is a means to meet local felt needs and redistribute scarce resources, but also has inherent value as a process which empowers the poor by enhancing local management capacity, increasing confidence in indigenous potential and raising collective consciousness (WB1998: 2106).

Ostrome stated in Kirkby (1995:233) that,

> *small scale communities are more likely to have the formal conditions required for successful and enduring collective management of the commons. Among these are the visibility of common resources and behavior toward them; feed back on the effects of regulations; widespread understanding and acceptance of the rules and their rationales; the values expressed in these rules (that is, equitable*

treatment of all and protection of the environment); and the backing of values by socialization, standards, and strict enforcement.

People's participation is believed to be a nucleus of sustainable development. The concept of rootedness shows indignity, the right of people's initiatives to create a survival niche. The extent to which programs and the project are based on indigenous knowledge and thinking is a primary indicator for auditing participation (Berhanu 1993:169).

According to IFAD (2501:10), Participation should be thought of as a political act-it enables voice to be heard and in so doing, changes power relationships. It promotes accountability and transparency.

3.5 Rational of Community-Based Natural Resource Management

There is a debate on which private, government or commonly held property could be sustainable. There are two views according to the World Bank. People in a situation in which all could benefit from cooperation will be unlikely to cooperate without an external agent to enforce agreement. Common property resources will be over exploited as demand rises, so only private enclosure or state regulation stands a chance of preventing a result. It argued, they have been inappropriately applied to certain types of village resources. On the other hand, there can be no general presumption that collective action rather than privatization or state regulation will work: witness the frequency of degraded grazing commons, despoiled forests, overexploitation of ground water, and depleted fisheries. It also believes that privatization or state regulation is therefore not always essential. The third option will be local collective action- needs to be taken seriously (WB 1987:219).

Effective management of forests cannot be achieved without the goodwill and co-operation of local communities. Local people should not just volunteer goodwill in exchange for benefits from forest exploitation, but should actually direct forest development and control the resource (Ghai 1995:89).

Moreover, it stated that the concept of local resource management might be regarded as the result of the application of the participatory development approach to the field of local use and management of natural resources. According to this approach, decision-making power and responsibilities should be entrusted to the local population, and they should have an

important share in the benefits of their efforts. In line with this approach the local form of organization and management should be used to maintain and develop natural resources and effectively control the observance of desirable behavioral change (Breemer 1995: 4).

In the emerging consensus community- level organizations are commonly assumed to regulate the use of relatively homogeneous environments in the community's interests. Environmental degradation is assumed to reflect a growing lack of synchrony between the community and its natural environment, and the implied solution is to reconstitute community based natural resource management (CBNRM) organizations so as to restore harmony to environment-society relations (WB1999: 226). It is argued that community organizations are the main vehicle for their own development activities. But it is necessary to understand social differences and diverse institutions, which support different peoples endowments, entitlements and environmental management, points toward possibilities for a more strategic specificity in interventions.

3.6 Local Accountability to Resource Management

In addition to improving the socio-economic conditions of rural populations, rural development interventions should assign key importance to attaining a high degree of sustainability in the use of natural resources. Sustainable use of these resources, in both ecological and socio-economic terms, implies a high degree of involvement and participation by local populations. Such involvement and participation depend on the extent to which these populations really feel able to assume and accept accountability for the protection and management of forest and other resources in their direct environment (Breemer 1995: 196). He argued that accountability of a local farmer for natural resource management implies in first place accountability to himself and his community. It believed stated that,

> *Local people will feel responsible for their natural resources only when they can exert control over such resources, when they can impose duties and obligations on themselves and when they have the rights, knowledge and means to exercise such control and are sufficiently interested in the process* (Breemer 1995:196).

It believed that sustainable management of environment or resource could be achieved only when the involvement's of local people playing an important role. Breemer (1995:193), argued that sustainable management of environment could not be taken as a matter for state intervention only, as it concerns directly, and in an individual way, all those who live off the

land and its resources. In many cases, these local populations have quite a conscious sense of accountability for such management; despite the fact conditions to effectuate this accountability are rarely fulfilled. Accountability of local people is considered essential for the socio-economic and ecological sustainability of activities undertaken either by local people themselves or in the context of development interventions.

Breemer (1995:198), noticed policy and development program to be designed in a way that promote the level of local people accountability in managing natural resource. He stated policy and program instruments only make sense if they respond to the needs and priorities of the local people directly in charge of natural resource management activities. Sustainable management of natural resources will only be feasible if there is a high degree of accountability at the level of local communities. To arrive at sustainability of such programs it is imperative that the people feel responsible for the activities and results initiated by the program. In natural resource management sufficient accountability should be created at both the local and national level. Development programs can attribute to fulfilling the pre-conditions needed to achieve such accountability.

Pre-conditions for local accountability

Laban cited in Breemer (1995:196-197) identified the rights; capacities, benefits and claim-making power of local people, which is, as pre-conditions to assure their involvement in and their accountability for sustainable management of natural resources are as follows:

- people will undertake land use activities only when they see clear, preferably tangible net benefits in terms of products, income, services and political influence or even in terms of confirmation of their feelings concerning moral, spiritual and ethical values.
- People will undertake land use activities only when, in their opinion, they have the necessary capacities (knowledge, technology and means) to carry out these activities.
- If there are insufficient guarantee (rights) that they can indeed make use of the products and services resulting from such activities, they most probably will refrain from doing so.
- Local communities are seldom-homogenous units; on the contrary, there are often multiple conflicting interests among the different groups composing a village community. Different interests between men and women, nomads and farmers, different casts or ethnicity groups, political parties, etc may occur and may lead to

situations where the management of natural resources could essentially be considered as a problem of conflict management.

One of the studies in Senegambia indicated that, four preconditions existed at the local level to improve local environmental management. First, the population involved should gain insight into the problems in their own environment, and perceive that these problems directly concern them. Second, the practical involvement and the third, the local population should feel that they are able to do something about the problems. They them-selves are in a position to determine whether the area remains inhabitable or becomes more so. In short, faith in their own power. The final precondition is that the people should feel that their efforts to achieved improved environmental management will benefit them; the sooner this benefit emerges the better motivated they will be (Breemer 1995:172).

The most important things that increase the degree of accountability is benefit from the management activity. It is stated that benefits as a precondition for accountability they should be assured of the benefit, which are economic value. Thus, he stated that,

> *... people will feel more accountable for the management of natural resources if they can be sure of benefiting directly from the use of these resources. If direct interest in protection and management of natural resources is low, local people will refrain from investing time, effort and money in such activities (*Breemer 1995*:203).*

3.7 Factors Affecting People's Participation in Natural Resource Management

Many factors could possibly affect people's participation in Natural Resource Management (NRM). According to Singh (1992: 12), there are seven barriers, which can lower people's participation in NRM. These are, easy availability of grants and subsidies, prejudices and discrimination against women, illiteracy and lack of awareness, factionalism and heterogeneity of population, disparities in wealth and social status, interference by politicians, and misunderstanding about the motivation and objectives of people's organization.

The participatory forest management- an approach of sharing made between local people and government to be accountable and responsible in forest resource protection and management on sustainable bases (Singh 1992:12). However, participation is not panacea for the

conservation of forests. The World Bank (1998b: 2105 & 2115) study indicated that, participation become overwhelming popular in recent years without sufficient attention paid to its ambiguities. Even if they adopt participatory rhetoric it is almost certain that many project-level employees of the developed industry do not really want the empowerment of others to threaten their own livelihoods. Not only the stated problem facing the approach but there are many other deterring factors that influence the expectation of community forest management. For example since the early 1980s there has been an unprecedented enthusiasm for participatory approaches to forest management (social forestry) in Bangladesh. But the practical research on the contextual factors such as social relations, institutional structures, forest policies and land tenurial arrangements which condition social forestry performance.

In Bangladesh tenurial security is a major motivating force for farmers. However, providing permanent title to land alone has little impact on farm productivity or on the growth of collective effort among social forestry farmers. Farmers need institutional assurance and support especially from the government to utilize the potential rights and benefits associated with such ownership (Public Adm &dev't. 1998:334- 335). Similarly, the Word Bank listed some reasons why practical implementation problem of community based natural resource management arises. These are the tendency for the intended beneficiaries to be treated as passive recipients of project activities, tendency for project to be too-short-term in nature and over reliant on expatriate expertise, a lack of clear criteria by which to judge sustainability or success in meeting conservation or development goals, and the interests of certain social groups have been consistently marginalized (WB1999:226).

The profound challenge that faces participating approach is that complexities at the field level constrain the application of genuine people-centered participation (WB 1998:2116). It is argued that, local people's perception is not only shaped by academician expression but rather by past experiences. For then participation has little to do with self-reliance, empowerment or even efficiency. Instead it is an opportunity to extract resources from willing agencies, communities can manipulate participation by bargaining with the agency for more benefits and less work, feigning helplessness, or providing anticipated/ conditioned responses (WB 1998:2116). According to Brandon (1993:16), the existing authority structure in many societies and government when they perceived participation is a threat to their own authority are some of the barriers to local participation.

The impact of property right on forest clearance and its management is significant. In most African countries, the forestry codes contain detailed stipulations of the usufruct rights that villagers can enjoy in adjoining forest reserves. There are also lands, which are more or less permanently uncultivated, such as fallow lands and forests outside forest reserves, generally considered as "Common" lands. In customary tenure, the lands would essentially be considered as the property of the families founding a territorial community. They have a "right to burn" or "right to cut". These families traditionally have the right to occupy, exploit and inherit the lands. Property right to the trees may be connected with position of the lands: the trees in a field belong to the family that has inherited this field (Breemer 1995: 202).

There is an argument that securing property right is the most determining factor in the agenda of resource management. In open access or communal resource, there is no restriction on the number of people who can use it and the amount they can extract. This will lead to a situation where every one will try to extract as much resource as possible leading to overexploitation and possible total exhaustion with the principle that every body's property, i.e., wealth that is free to all is valued by no one (Teferi 1999:358).

According to Singh (1992:16), homogeneity and heterogeneity of a community in terms of caste, class, ethnicity, assets, income, etc., are important determinants of people's participation. For example in India, most rural communities are highly heterogeneous which was a major constraint on collective management of natural resources.

3.8 The Major Institutional Actors in Forest Management

The most important actors or stakeholders in forest management are users, indigenous institutions, NGOs, government and development agent.

Users. This includes numerous subgroups based on differing interests, power and location. They rarely form a homogenous group because of the diverse range of interests that may exist among them. The most obvious subgroups are those based on livelihoods. For example, livestock owners, loggers, blacksmiths, hunters, landless peoples, poor women and members of lower castes, could represent different interest groups as related to their use of a particular forest (FAO 1999:38).

Indigenous institutions. Indigenous institution has great contribution in forest management if they agreed on and if they believed that they benefited from preservation of forest. The preservation of indigenous management systems must have top priority in development cooperation with Africa. According to the argument, these indigenous systems are characterized by a strong integration of economic, social, and cultural institutions and values, kinship being the chief unifying attributes and the household base for the division of labor (Breemer 1995:185).

The World Bank stated that there is recognition of the role of society and their culture in which they likely positively influence international development agendas and state policies. Instead of trying to harness practical indigenous knowledge to facilitate preconceived development models- an approach that is both derogators and ineffective, there is growing recognition that indigenous epistemologies, science and ethics have much to offer to the sustainable development (WB2000: 16). The operational directives provides guidelines for bank supported projects that affect indigenous people and states that bank staff must ensure the "informed participation" of indigenous people in the participation of development plans and in the project design, implementation and evaluation (WB 1992a: 106-7).

Non-governmental Organizations. As any development program the involvement of NGOs may have a valuable role in natural resource management. This is because most of the people particularly the illiterate society have less knowledge about the negative impact of mis-utilization of natural resource and rather they look for the short-term benefit. In that case NGOs are more close to the local people so that they can participate the community in the resource management. It believed that, NGOs are unique in influencing, encouraging and assisting societies throughout the world to conserve the integrity and diversity of nature as well as to ensure that any use of natural resources is equitable and ecologically sustainable. NGOs in most African countries are actively undertaking natural resources management by diverse strategies. For instance, they oppose the misuse of natural resources. They engage themselves in restoration of Law and enhancement of indigenous technologies or the development of alternative technologies that are less destructive to the environment. Also, NGOs are active in advocating and raising public consciousness on environmental problems and call for actions and changing the existing institutions, laws and attitudes (Palmer and Muchiru cited in Ginjo 2000:47).

Similarly Singh (1992:28-29) listed some of the important role of non-governmental organizations. *NGO's are creating and enhancing awareness of the local people.* He argued that most NGOs because of their better and closer contact with local people and greater credibility among them than that of government organizations, could do a good job of educating people, and creating and enhancing their awareness about the critical role that natural resources play in their lives. *NGO's are organizing and empowering of the local people*. It has realized that unless local people are formally organized into some form of co-operative society or associations, their participation in NRM cannot be sustained overtime. Thus, the job of organizing and educating the people should be assigned to NGOs of good standing, if existing locally. Three they are good in *field trails, demonstrations and training on natural resource issues.* NGOs are eminently suitable for conducting and demonstrations of new technologies with the co-operation and participation of the local people and for training them in their use. *Finally, NGO's are play better role in project implementation.* He argued that many NGOs now have the requisite technical and managerial expertise to implement such programs and that because of their close touch with people-centered flexible approach; they can do a better job of project implementation with people's participation than government organization.

Government. Many scholars and organizations believe that government has a great deal in protecting natural resources and sustainable utilization. According to FAO (1999:40), government subdivided into policy-makers (and politicians), senior government officials, field personnel and other governments. The government is an important stakeholder because nobody else concerned with resource management as of it. The role and interests of each subgroup within government differ. *Policy makers* including politicians are likely to view natural resources in terms of how their management can contribute to the broader development goals of the country, to local political agendas, or towards fulfilling the obligations of international treaties. *Senior government officials* in different line agencies, local government and other government bodies direct efforts for implementing policy and have a substantial impact over what is, or can be done by the government in particular location. *Government field personnel* on the other hand can provide the direct link between the government's requirements from above, the needs and interests of stakeholders absent from the local scene, and the needs and priorities of local stakeholders.

The role of government in natural resource management particularly in less developed nations are immense. Government has a significant role to play in natural resources development and management and that it should serve as a catalyst and facilitator in the process of enlisting peoples participation. According to Singh, there are some major roles of government institutions to be engaged in natural resource issues. First, *it is safeguarding the interest of future generations*. The responsibility of long term planning and management of natural resources should be assumed and discharged by the government, which has a longer planning horizon than individuals. Second, *it provides funds*. Since there is difficulty to exclude free rider there is no incentives for private investors to provide fund for such investment of uncertain benefit. Thirdly, *it provides technical information and guidance*. For instance in India according to the writer, all the research in the area of natural resource development and management is done by government research institutes and hence, the government has the responsibility to widely disseminate research based information about new technologies, methods, and practices relating to natural resource management. Lastly but not least, *it creates a conducive legal and political environment.* Regulation and coordination of activities of individual resource owners and users is a legitimate responsibility of any government (Singh 1992:27-28).

Development Agent provides funds and other services to national development programs. This group includes: international donor organizations that grant or lend money, the consultants hired to formulate, review, study and evaluate development programs, and non-government personnel of projects funded by the international donors. Non-profit private organizations are interested in executing policies; remaining competitive and use resources effectively; promoting human or ecosystem well being and capacity for self-help; enhancing reputation and image; an improving membership or funding base. Private non-profit organizations include a multitude of international, national or local organizations that holds some interests in natural resource management. Such private organizations can be self-appointed providers of development support acting as a donor, a consultant, a "project" or organized interest group (FAO 1999:43).

3.9 Natural Resource Management and Sustainability

There are several definitions for sustainability. However some of the most common definitions are given. According to The United Nation World Commission as cited in Ghahi (1995:76, Kerry 1993:4 and WB 2003:14), sustainable development refers to the means by

which 'development' is made to meet the needs of the present without compromising the ability of future generations to meet their needs. It also notes that sustainable use in rural context involves not only conserving biological diversity, fauna and flora, but also maintaining ecological functions such as soil quality, hydrological cycles, climate and weather, river flow and water quality. The world Commission on Environment and Development cited in EEA about sustainability as follows: *Humanity has the ability to make development sustainable-to ensure that it meets the needs of the present without compromising the ability of the future generations to meet their own needs* (EEA 2002:9).

Moreover Pezzey (1992:55-57) defined sustainability, as the quality of life should not decline over the long-term future. He defined **sustainable development** as:

- Using renewable natural resources in a manner which does not eliminate or degrade them, or otherwise diminish their usefulness for future generations....sustainable development implies using non-renewable (exhaustible) mineral resources in a manner which does not unnecessarily preclude easy access to them by future generations. Sustainable development implies depleting non-renewable energy resources at a slow enough rate so as to ensure the high probability of an orderly societal transition to renewable energy.
- Sustainable development is defined as a pattern of social and structural economic transformations (i.e. *development*), which optimizes the economic and societal benefit available in the present, without jeopardizing the likely potential for similar benefits in the future. A primary goal of sustainable development is to achieve a reasonable and equitably distributed level of economic well being that can be perpetuated continually for many human generations.
- Sustainable development – development that is likely to achieve lasting satisfaction of human needs and improvement of the quality of human life.

The concept of sustainability as stated by Ghai (1995:69) emphasizes four basic principles when applied to rural communities that basic needs must be met; that resources should be subject to local control; that local communities must have a decisive voice in planning; and that they should represent themselves through their own institutions. Further more, it suggested that the implementation of sustainable development should be based on local-level solutions derived from community initiatives (WB 1999:225).

According to Kerry (1993:4), if a society accepts the desirability of the goal of sustainable development then it must develop economically and socially in such a way that it minimizes the effect of it activities, the cost of which are borne by future generations. In cases where the activities and significant effects are unavoidable, future generations must be compensated for any cost they incur.

It suggested that, one of the incentives for ensuring sustainability of resource is reducing uncertainty by ensuring resource right. However according to the writer the capitalization of such gains in land values granting tenure of itself may not be sufficient to improve natural resource management but others such as population pressure to increase local demand for agricultural products, the availability of soils suitable for agriculture and accessibility etc (Kerry 1993:91-93).

In general sustainable development needs the involvement of beneficiaries. To ensure sustanible development of resource, those who have close contact with the resource must accept that the goal cannot be achieved without their participation. Sustainable development can be achieved only if it is deeply rooted in every local neighborhood as success can only come through active participation from all corners of the community with individuals and organizations playing to their own particular strengths (EEA 2002:10).

IV. Methodology Employed and Data Source

Source of Data

The main data source is primarily collected by household survey on WAJIB members of Integrated Forest Management Project in Adaba-Dodola. It is a cross-sectional survey of the year 2001. Data were collected through household survey in Barisa and Danaba Peasant Association (PA) or Kebele Administration by means of face-to-face interviews using structured questionnaire. Moreover, some secondary data have been used to supplement the information from documents prepared by different organization and the project.

Sample size and Sampling Method

There are three peasant associations where forest dwellers adopted the WAJIB approach. The total population of the Barisa, Bura Adele and Deneba PA are about 6106, 8491 and 8013, respectively. The total household or family heads of these PA are 824, 968 and 1246 respectively. However, all these family heads are not involved in the membership of WAJIB (Forest Dweller Association). There are 39-forest block in the 3 pilot PAs (6 in Barisa, 22 in Bura Adele and 11 in Deneba). The number of households that were organized under WAJIB approach are 158 in Barisa, 658 in Bura-Adele and 303 in Deneba peasant Association. However, in Bura-Adele PA, the contractual agreement is not yet signed. The implementation started in two PAs such as Barisa and Deneba where there are 6 and 11-forest blocks respectively. .

Two-stage stratified sampling method was used. It was believed to increase the representation of the sample to the population where the study was conducted. In the first stage, Barisa and Denaba PAs were selected and sample data were collected from them. In the second stage, ***purposive sampling*** method was used to select forest block based on the convenience to collect the data. Hence, six-forest blocks were selected where three forest blocks from each PA.

There are a total of 17-forest blocks that put the management activity into implementation, 6 in Barisa and 11 in Daneba PAs. One may wrongly think that there is biase to Barisa PA when equal number of forest block (3 from each) selected. Since the first management trials

people are more conscious so that I briefed them the side effect of misinformation. I did detail discussion with them so that they have mentioned important information.

Sampling frame. The list of those households involved in WAJIB and theirs socio-economic condition from the IFMP executing agencies (represented by the Oromia agriculture Bureau and GTZ).

Sampling unit. There are three sampling units for the three stages of sampling, peasant association, the forest block and the households.

Observation unit and Data Collection unit. Both are same in this study. Only Household who are the member of WAJIB association has interviewed. Collecting information only from the members of WAJIB helps to increase the quality (consistency and reliability) of data needed. Observation units are households registered in WAJIB approach.

Population, and survey population. All households living in the two-peasant association in a period of the year 2001/02 are considered as population, but survey population are the sample population of individuals that registered as a member of WAJIB in the two peasant association (Barisa and Danaba).

Element. The households who are the member of the WAJIB association are an element of this survey

Data Gathering Method. Before comprehensive data collection through interview had been undertaken, pilot survey was conducted in the form of participant observation and focus group discussion. Informal survey through open-ended and non-structured questionnaire was done. To test the questionnaire and also get preliminary information of the research result, some individuals' were interviewed on structured comprehensive questionnaires.

Some major questions prepared for IFMP and District Agriculture office experts. Thus, open-ended questionnaires distributed to two IFMP experts and to one District Agriculture office expert. Moreover, focus group discussion has used with six WAJIB members selected from two forest blocks in Barisa PA. However, it was found that the group does not freely forward the information so that the information is not used in the analysis but used only as benchmark.

By considering this information, the comprehensive and the structured questionnaire were modified. Then face-to-face interview with those selected sample households of WAJIB members was conducted.

Method of data Analysis. In this study, explanatory data analysis is used to explain the relationship between level of people's participation and its determining factors that affects people's participation, and looking for the causal effects of these determinants on participation of people. This relationship was studied using frequencies and percentiles. Tables are used to describe the data result.

V. RESULTS AND DISCUSSIONS

Perceptions of people towards participatory forest management, areas in which the WAJIB members participate, major factors that enhance or hinder WAJIB members' participation in forest management are discussed in this chapter. Notice that, in most of the tables, the responses in number do not add up to 90(total number of respondents) and the percentage do not add up to 100 due to multiple responses.

5.1 Areas of people's participation

In principle the intervention of projects and government in the area of forest conservation could be in nursery development, plantation of seedlings, protection of existing trees and forest areas and marketing of harvestable trees. However, the entire informants reported that IFMP has not given attention to nursery and plantation of trees within the forest areas. In contract, the project promised to establish nurseries for tree seedlings and plant tree seedlings in certain regeneration area of the forest block. Till now the intervention was confined to protection of high forest. Tree planting activity outside the natural forest contributes significantly to wood supply. According to IFMP report, in 1999, peasants produced 3 million Eucalyptus seedlings with the project support. As a result 20 million seedlings have to be produced annually. However, outside the WAJIB members, adjacent to the forest, there are activities going on in distributing tree seedlings to personal consumers, which resulted in reducing the pressure on high forest.

The IFMP Adaba-Dodola project adopted bottom-up approach (decision-making process from the beneficiary) so as to manage the activity. The informants were asked in which stage they have participated. Then the responses of the informants are summarized as shown below.

Table 5.1: Frequency distribution that shows at which stages WAJIB members are participating

Stages of participation	Number of respondents	Percent %
Idea generation	85	94.4
Planning	88	97.8
Decision making	87	96.8
Controlling	89	98.9
Total	**90**	

Out of the total informants covered in this survey, overwhelming numbers of the respondents (94.4 percent) were participating in idea generation while the discussion was taking place. In

the same token, nearly about all respondents (97.8 percent) participated in planning, 96.7 percent in decision-making and 98.9 percent in controlling the forest activity. This could more likely develop transparency and trust to the project.

The most important thing is that mere physical existence has nothing to do with the right and obligation of the communities (accomplishing and exercising the right and rule), but having sound and equal right and influencing in the decision making process would contribute more. When they were asked to evaluate their influencing power in decision, 75.6 percent of the respondent said they have strong influencing power and the rest 24.4 of them said they have weak influencing power.

The project gave a great emphasis to management activity of the existing priority forest. However, within the forest area, less effort is made in plantation activity even in some degraded forest area. The project has played inadequate role in integrating social and economic development to forest conservation activity. Moreover, there is no such feasible provision of social and economic infrastructure except some rural roads that take to the forest especially to tourist potential areas. In fact, there is an initiative of the IFMP to begin with eco-tourism activity that could create employment opportunities and income generation scheme. Despite this could help in reducing the pressure on forest by providing alternative to forest dependent group of community, it has insignificant impact. Therefore, provision of social and economic infrastructure like school and supporting in the expansion of small-scale industries are some of the areas that badly need intervention to reduce the pressure of forest directly or indirectly in short and long run timeframe.

Moreover, adopting similar approach at the rest of forest priority areas is slow. Even though capital (financial) and human resource problems are prevailing, the project till now was implemented in only two PAs, and the third PA's is on the process of completion. But there are many PAs surrounding the forest, so that there is severe destruction of forest. The destruction emanate from the fact that, people knew the criteria that guarantee the use right on forest and that exclude from use right. So those people who expect themselves out of the forest users compete to over use the forest.

5.2 Level of participation and the response of the people towards PFM

In the forest conservation activities, the project officers give technical support and consultation to the communities. They recommend that how the communities should protect the forest, plan their activities, and use the forest rationally or economically. The forest dwellers have positive response towards what the project coordinators recommended to do. Out of the total sample population selected, 93.3 percent of the respondents said they have fully practiced the recommendations given by the project owners while 5.6 percent of them said they partially practiced the recommendation. In fact, it should not be thought that all individuals are equally practicing in all activities of forest management.

Some of the areas that people involve in forest management are protecting forest, practicing the rule and regulation, attending meeting and paying for the forest use rent. When the informants were asked how frequently they were attending meetings, out of 90 informants covered by this survey, 90 percent of them said they always attend meeting while the rest 10 percent try to attend meetings sometimes. They were also asked to evaluate the degree of their participation in collective action in forest conservation activity. According to the respondents, significant proportions of them almost 91 percent are actively participating while only 8.9 percent of them are participating less actively.

The three WAJIB forest blocks in Barisa PA have already paid the rent. The money is generated from selling the grass and forest products and paid jointly. The forest blocks in Deneba PA are on the process of completing their payments. Thus, in general, the study reveals that there is strong community participation level in WAJIB in Adaba-Dodola Priority forest activities.

5.3 Perception of WAJIB members towards PFM

The survey result has indicated that most of the communities have positive attitude or perception to PFM. The survey result indicated, 93.3 percent of the respondents believe that PFM is an important solution to alleviate the destruction of forest whereas 6.7 percent of them believe that PFM is less important. The informants were asked to state the major reasons why they feel PFM is an important solution for forest conservation. The response mentioned by informants is indicated in the table below.

Table 5.2: Frequency distribution that shows reasons why WAJIB members had positive Perception to PFM.

Reasons stated	***Total Respondent***	***Percent (%)***
Reduced deforestation rate after WAJIB established	86	95.6
Authority of the community	59	65.6
Improving inventory of forest	55	61.1
Accountability of people	38	42.2
Others	31	34.4
Total	**90**	

As it has been shown in the table above, majority of the respondents reacted positive about PFM. This is because they have seen encouraging change as a result of WAJIB approach in forest conservation. They have mentioned that the reduction of deforestation rate, the improvement of forest regeneration, and the growing of new young seedlings are the major reasons why they have developed positive view to the approach. Out of 90 respondents, 95.6 percent of them positively accepted PFM because they are impressed with the reduction of deforestation rate in their surroundings and 61.1 percent of them are impressed with the regeneration rate of deforested trees and the growing of seedling under the existing trees.

Moreover, the authority or empowerment and accountability given to the community are the two reasons why 65.6 and 42.2 percent of the respondents positively perceive PFM, respectively. One of the leaders in one of the forest blocks indicated that in addition to the factors stated in the table, ownership feeling and positive expectation of using forest in the future are the most important factors that encouraged him to manage the forest actively. Therefore, people can have positive view towards externally imported program if and only if they are empowered on the resource, and willingly be accountable for that resource. Moreover, the need to see better change or the change to come after the program has been implemented is an important influencing variable.

The belief of the people in the WAJIB is not limited to short-term effect. Rather, most of them have strong belief on the sustainability of forest in the long run. They were also asked whether the WAJIB forest management approach could be a vehicle for sustainable forest life. Accordingly therefore, about 63 respondents believe that WAJIB/PFM approach is a means of attaining sustainable forest resource. 11 respondents reacted, they *do not know* while 16 respondents reacted *accepted on condition.* According to these 16 respondents, the necessary conditions that ensure the sustainability of forest are *the trust of government, NGOs, the whole community, and other stakeholders on the project, and their involvement in*

follow-up process, and support them in controlling, regulating and enforcing the law, rule and regulation etc. One of the key informants stated *unless those people whom their livelihood depend on forest resource have not get other option to live on, I doubt that PFM approach is a vehicle for sustainable forest management.*

5.4 Factors enhancing people's participation in PFM

There are many factors that can be taken as reasons for people participation in forest management activity. These enhancing factors are identified in the field survey by making use of open-ended questionnaires. The respondents have listed-out some of the most important variables that enhanced their participation. Closed-ended questions are also used to confirm and at what extent the variable can play a role in motivating them.

Table 5.3: Frequency distribution that shows Major factors enhancing WAJIB membrs participation

Major factors	**Participants**	
	Frequencies	**Percent %**
Physical Benefit (local consumption)	46	51.1
Monetary benefit (generating cash income)	38	42.2
Awareness created (improved awareness)	28	31.1
Granting ownership right (improved property right)	25	27.8
Fear of displacement (fear of losing membership)	21	23.3
Environmentalism (Having bad feeling to the forest destruction)	16	17.8
Accountability (moral obligation)	3	3.3
Total	90	

5.4.1. Benefit derived from forest resource

When the informants were asked whether they expected any benefit from participating in PFM, then the entire respondents reacted they are expecting much benefit from this resource. They were asked at what extent the benefit derived from forest initiate them to actively participate, 72 respondents (80 percent) indicated that it strongly motivates them. One can understand from this result that the level of benefit that people derived from forest is in compliance with the level of participation in forest management.

Communities living in, and near the forest are getting benefit from forest and forest product for themselves and for their animals. The most important initiating factor in participatory forest management is the benefit that people generate from forest resource.

Table 5.4: Frequency distribution that shows the benefits that people expect to get from forest

Benefits	Participants	
	Frequency	Percent
Monetary benefit	74	82.2
Using forest product for housing &fuel	89	98.9
Grazing, shading	78	31.1
Aesthetic benefit	9	10
Soil conservation & watershed	56	62.2
Total	90	

The benefits can be categorized into two major components, physical and monetary.

A) Physical benefit or local consumption

The most frequently appreciated variable by the informants is physical benefit. There are many kinds of physical benefits that people need to get from forest and forest products. As they have mentioned the benefits included products for their own consumption like fuel wood, timber and pole for housing and fence construction, grazing their cattle in the forest, shading purposes, regulation of climate, soil conservation and aesthetic purpose. In this case local consumption is the most important kind of benefit.

This is directly related to day-to-day life of the people. Out of total respondents, 51.1 percent stated that the physical benefits, that they get out of forest resource in existing condition and its products initiate them to participate in PFM. In the table above, it is possible to see almost all or 99 percent of the people accepted that the forest is useful for their day-to-day life such as housing and fuel. In the contract made between WAJIB member and Oromia government by the mediation effect of IFMP, the communities have the right to use the forest for the above-mentioned benefits on the basis of agreement among the members. However, the utilization of the forest has its own specified rule and regulation, which ensures the sustainable forest stock.

B) Monetary benefit or source of cash income

The second types of benefits people expect and currently generate are monetary benefits. It is one of the basic sources of additional cash income to the people who are living within the forest area. The earnings from sales of forest products and other incomes related to forest, for example, benefits from eco-tourism, tourist guiding, renting horses for tourist, are some of the cash income people generate.

Most of the communities, i.e., about 87.8 percent of the respondents are occupationally engaged in mixed farm. As some observation goes and some respondents explained, majority

of them including the families of the members are engaged in selling fuel-wood and other forest products so as to generate additional income and thus, 82.2 percent of the people are liable to use the forest as additional income. The income from this activity is used for subsidizing their income to pay different taxes and to buy clothes for themselves and their families.

Thus, the monetary income that the people expect from forest and forest product is the important factor in initiating people to take care of the forest. However, if they are not guaranteed the right to use the forest, some of the individuals will excessively exploit or use it inefficiently causing great damage on the forest.

5.4.2 Awareness created

The people were asked what factors initiate them to participate in forest management. Out of all the respondents, 31.1 percent expressed that understanding the importance of forest and the effect of the destruction are the major factors that encouraged them to participate in PFM (WAJIB) actively. According to the data collected, 93.3 percent of the respondents agreed that the forest has paramount importance for them. When they were asked whether they know or not about the adverse effect of deforestation, 98.9 show they know it well and one individual indicated he does not know the effect.

Table 5.5: Frequency distribution that shows effect of deforestation

Effects of deforestation	**Respondents/participants**	
	Frequencies	**Percent %**
Desertification	85	95.5
Poverty, hunger	19	21.3
Lack of fuel wood, grazing	8	9.0
Land degradation &wind force	20	22.5
Absence of water	20	22.5
Migration of wild animal	4	4.5
Loss of natural shade	5	5.6
Total	89	

The table shows that the people are well informed about the effect of deforestation on their survival. Majority of the respondents, which is about 95.5 percent of the total sample population, understood that desertification is one of the major problems of deforestation. This shows that having a better knowledge about social and economic impact of deforestation encourages people to take part in forest management activity actively.

Some of the people in the forest region explained about the past situation of the forest in their environs and showed the areas that were covered by forest. Additionally, they explained about kinds of wild animals that had been living in the forest nearly a decade or so ago. Some of them remember the extensive deforestation and the amount of forest off-taken day to day and year after year. It was not only cleared by many people from villagers around the forest, but also people from Arsi zone around Assassa and other parts of Bale zone.

Most of the informants have got better information about forest and impact of deforestation. When they were asked about the impact of information, 95.6 percent of the respondents (86 people) noted that knowing about effect of deforestation has strong impact on their participation in forest management. Thus, the awareness created about ecological benefit of forest and effects of deforestation initiated them to participate actively and practice the recommendation. In some rural areas, some people burn the forest/bush to be protected from wild animals and to expand farmlands. This could be the result of lack of awareness about the direct and indirect advantage of forest in their life. In association, the effect of clearing is the most problematic variable in many parts of the country.

The IFMP has greater role in making people aware of the forest use and the devastating consequence of deforestation. The project staff members taught both WAJIB members and non-WAJIB members about the forest by visiting them frequently at their living areas. Moreover, the project arranged a visit-learning program for some selected group of community at the degraded areas of northern, central and western parts of the country. Such practical demonstration has an important role in changing the attitude of people. As a result of this effort, there has been a diffusion of information to the rest of the community who are not involved in the visit program.

Table 5.6: Frequency distribution that shows stakeholders involved in informing WAJIB members

Information about	***Stakeholders involved by:***									
	GTZ/IFMP		***Agriculture Office***		***School***		***Visit of other region***		***Mass-media***	
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*
Forest use/benefit	82	91.1	13	14.4	5	5.6	-	-	-	-
Effect of deforestation	83	92.2	8	8.9	17	18.9	15	16.7	27	30

As it is clearly indicated in the table, the project owner or IFMP played a great role in disseminating information and teaching people. In fact, there are staffs involved from agricultural office; no one considered them as part of government organ. School and mass

media are the two very important potentials of information; only those educated and b skilled farmers have access to it. When we see for instance, the association betw education level and knowledge about the effect of deforestation, out of 31 illite respondents only 13 percent of them know the effect of deforestation from mass me release. Similarly, out of 13 respondents who are attended adult education, only one per understood the effect of deforestation from the mass media. But those respondents who formal education have better information about forest from the mass media. Accordingly, c of 34 individuals who had access to formal school from grade 1-6, 35.3 percent of them ha information from the media dispatch. Out of 10 people attended school from grade 7-12, percent knew the effect of deforestation from mass media program, and out of the two peop who attended school above grade 12, both of them knew the effect of deforestation from mas media program.

Again, less number of people learned the effects of deforestation from school. But there is increase in the number of people learned from school as their grade attended level ascends. Accordingly, out of 34 respondents learned from grade 1-6, only 20.6 percent of them knew the effect of deforestation from school discipline.

On the other hand, out of 10 persons who attended school from grade 7-12, 80 percent of them, and out of 2 persons who attended 12 grade and above both of them knew the effect of deforestation from their school course. Thus, disseminating information and awaking people in school and by mass media are important sources of forest management for people who are better enlightened than non-educated. Education is one of the important elements that help to relieve forest from destruction.

5.4.3. Granting ownership right

According to 25 respondents granted the ownership right on forest resource enhanced their participation on forest management activity. When we consider table 5.3, property right as an enhancing factor of people's participation is found to be on fourth stage. On the other hand table 5.4 could likely show almost all respondents ensured that they have the use right for their consumption. From this we can understand that, having ensured the use right, people give priority to current benefit, which they practically get rather than the ownership right, guaranteed in the property right, which is everlasting. In fact, what they practically get outweighs the future expectation. This could be for some major reasons like most of the

people's view is overshadowed by past government nationalization of private property, extreme poverty of the country and the level of people's understanding about the differences between exclusive right and use right. These situations lead community members to neglect future benefits in the interest of immediate survival.

This implies that people have the right to use every resource, taking it as their own possession. Most of the people have sense of greed to possess the forest property. If there is no rule and regulation that ensure people the right to use, they will have the intention of over utilization and or inefficient utilization for only temporary benefit. When they were asked whether the approaches ensured empowerment on resource and create sense of accountability, the entire respondents reacted that participatory forest management ensured empowerment and create a sense of accountability to all of the individuals collectively.

As indicated above, almost 98.9 percent of the respondents agreed that they have the right to use the forest for house construction, fuel, and fence. When they want to cut off large trees, for the purpose of house construction, pole, and timber the person is supposed to make an appeal to WAJIB committee of the block. The committee presents the application to the members for decision so that if the members found that it is reasonable, they decide and allow him to do so. Giving the right to use the forest has played a great role in developing a sense of ownership right so that they feel much concern towards the forest development.

One can understand from the responses that this is difference between public property, which is open-access to all, and collective property where the resource is clearly defined and demarcated to specified people. In the case of public property, people may not have clear sense of ownership or sense of privacy on the natural resource. Therefore, there is no effort in protection and economic utilization. In the case of collective property, there are specified people ensured of the ownership right. In such a case, there is some sense of private ownership. There is also internal rule and regulation to administer the members. Consequently, there will be a better management and relatively efficient utilization of resource.

5.4.4. Fear of displacing from their area

The WAJIB was established with those people who are living in the forest and in the immediate adjacent localities to the forest. So these people are supporting their life directly or

indirectly from the forest. They graze their cattle, they plough near the forest, and they use the forest product like fuel wood, timber, pole and other for their own consumption as well as for commercial purpose. Table 5.3 indicates that only 21 respondents mentioned fear of displacement as one factor that motivates people in forest management. Even though it seems less number of respondent have mentioned displacement as an affecting variable, it has significant impact. Thus it proved that accountability regarding measures taken on people who malpractice the rule and regulation affects participation.

Depending on observation it can be said that the area where WAJIB members, and non-WAJIB members who are living adjacent to the forest, had been living in the high forest for some years in the past. Those people, who are living adjacent to the forest, illegally exploited the forest. They and other external users who are living closer to the high forest gradually cleared the forest. One can be sure that, local people including the current WAJIB members and people from near town and some other individuals from distance cleared the forest. By the policy, the high forest was the property of the government, which should be controlled by the state. Even though the Kebele recognizes the communities as dwellers of the area, they suspect that government could demarcate their living area in the forest region. Again during the great destruction before three years ago where there was burning of Bale and Borena forest, the government officially announced that the forest dwellers should be displaced from the forest area to protect the forest from burning.

According to some key informants and project staffs, *one of the major factors that speed up the registration of WAJIB members is fear of such displacement*. Some respondents explained that *at the beginning of the WAJIB establishment in their area, they were in suspect of some bad outcome. They had neither confidence nor belief in the realization of the project. As a result they resisted accepting the project realization idea at all. After the burning of the Bale forest they fall in great fear that they could be obliged to be removed from the area by the state.* Some key informants stated that we *are highly adapted with this forest for the survival of our cattle and our children and we have fear that they could not adapt some where outside the green forest.* Then they were registered to the membership of WAJIB. As the respondents explained, they gradually developed trust on the project, as they started to exercise the right to use the forest.

Even today, they are afraid of forceful displacement because by the agreement they promised to leave the forest area if the forest stock is lost. It is stated in the contract that, *it remains valid for an indefinite period unless the tree cover of the forest block is found to have been reduced or deforested* (Contract Document 2000).

This is one kind disincentive that encourages people to manage forest. In fact, such kind of disincentive will not last long as enhancing participation but it forced them to accept the project program. Again there should be a clearly stated rule and regulation that define reasonable measures or punishment in a contract to let people take care-of the forest. In fact, this contract statement brought people under suspection.

5.4.5. Environmentalism

As to some respondents, they do not like to see the high deforestation; they would rather like to see the improvement of the forest. They have bad feeling towards destruction of forest resource. Accordingly, 16 respondents explained that they have lived within the forest for a longer period of time starting from their grandfathers. So they have greatly concerned about the forest but they do not have power to save it from destruction. According to them their active participation emanates from the love they have for the forest. This shows living with the forest for a long period of time in their family chains contributed for them to render great attention to the forest.

According to some of the respondents, they were the owner of part of the forest during Haile-Silasie regime but they had been snatched during the Derg period and hence the forest became ownerless. They explain that, they are satisfied now because they are the owners of the forest. One fellow who was selected as a key informant stated that his *father controlled the forest during imperial regime. Because of this he considered the forest as his property.* Another key informant also stated that *the forest was his grandfather's property, controlled by him and his hierarchical family during Hailesilassie regime.*

5.4.6. Accountability

This is rather related to ownership right. There are only 3- respondents who stated that accountability or moral obligation is a dominant motivating factor in forest conservation activity. In fact, as it is indicated above, 38 respondents i.e., 42.2 percent claimed that they have positive attitude towards PFM because they feel accountable to it.

The most important engine in initiating people to forest management are the benefit they have been granted, awareness of people to the advantage of the existing forest and disadvantage of its destruction and security of forest tenure. On the other hand, if all these are satisfied but if they are not accountable to the resource by the law, many problems will come to rise. They themselves could use the forest unwisely so that there could be competition within members in using the forest excessively, which leads to severe exploitation.

5.4.7. Other enhancing factors in people's participation

The most important factors that have vital role in people's motivation are mentioned above. In addition to these factors there are others that are important to look into.

- **Homogeneity of the people's interest in forest issues**

To measure the homogeneity of the people there are many things to be considered. However, the most important variables that could indicate the homogeneity are their backgrounds such as ethnicity, religious affiliation, birthplace, occupation, and marital status etc.

Table 5.7: Frequency distribution that shows informants background signifying variables

Variables	Background variables	No. of respondents	%
Ethnicity	Oromo	90	100
Religious	Muslim	89	98.1
Birth Place	Dodola Woreda	86	95.6
Occupation	Mixed farm	79	87.8
Marital Status	Married	80	88.9
Sex	Male	77	85.6
Total		90	

As the above table depicts, all people living in the forest are Oromo and are Muslims. The majority of them were born around the forest and occupationally almost all of them are similarly engaged in mixed farming specially, ploughing land outside the forest and rearing animals. Majority of the forest dwellers are married. It is observed that they are from the Arsi clan in Oromo nation. This implies that these people have a long-standing existing cultural and economic similarity to one another. It is observed that there is a practice of local discussion in every decision they make. Eventhough there is great respect to the elders, there is a kind of recognition of the young, which consider educational level or heritage or skill or capabilities in convincing people by giving good comments and ideas as a basis. Thus, all those things more likely have contributed towards the homogeneity of the respondents. Even

though there is a big difference in wealth status, educational level and other variables, their deep-rooted cultural background base outweighed to bring homogeneity in the people.

They were asked whether there is homogeneity of interests within a group in the forest management or not. From the selected sample population, 79 respondents indicated that there is a very high similarity of people's interests with in forest block members on the issue of forest. And, 8 respondents indicated there is less similarity. However only 3 people stated there are differences within the members. Again they were asked whether, this similarity has impact on participation or not, 78 respondents stated that it strongly enhanced participation and 8 of the respondents said it slightly enhanced participation. *Some of the respondents explained that unless there is similarity within them, how can they manage, protect, guard and efficiently utilize it.* One respondent told me a proverb in *Oromiffa that goes* , **wali galan malee hala galanii.** meaning that *unless a group agreed, how is it possible to return home from elsewhere.*

One can draw a lesson that in any development, which needs the co-management, should identify similar or homogeneous people to administer the project easily. In fact there could be the least possibility where organized people based on homogeneity could adversely affect the projects.

- **People's decision power on the issues of their own concern**

A community can be forced to adopt a new technology or if at least they should be convinced that they will get an advantage out of their participation. They may resist sometimes welcoming new idea unless majority of them (or at least some of them from their own local people) accept and convinced before the rest of the people. Out of the 90 households covered in this survey, 63 respondents (70%) believed that people decision power affect level of participation. In their oral statement, *unless they comments are accepted and equally treated it discourages them to work.* When they were asked what measure they will take if one rejects their ideas, they reacted that *they may not come to meetings and take actions to protect the forest though it is useful.* In fact some of them said that *what may come they will always in complete guard of the of forest so that they do not want to reduce their efforts because the forest belongs to them even their idea may get acceptance or not*. Hence,

having recognized in decision-making is one important variable in influencing participation level, attending meeting and practicing recommendation.

Thus, participants to be genuinely involved in matters about the forest should involve in decision-making and needs to get priority in expressing their interests. Here the members should get meaningful recognition and should play a leading role in any decision-making.

In the process of convincing the community the Approach developed the value of consultation and bottom-up process. The approach (WAJIB) of the IFMP Adaba-Dodola made the people develop trust on the project. This could be for many reasons. As mentioned above, the communities like the contribution of the project but they fear that it may phase-out. The process of adopting this forest management came across through different classical means of forest protection at different stages since 1995. At each stage different methodologies were employed, people participated in consultation. However, the community proved that the means employed at each stage came without any result. Transparency and clarity in the process of developing this approach are important means of creating trust.

It is observed that any measures and decisions reached involved the community. There were no enforcement and restriction imposed on them. Accordingly, 84 respondents (93.3%) proved that the WAJIB approach gives priority to the community interest in any decision. It practiced the theory of *putting people first on their concern*. This is a very crucial principle in any development activity. Again 78 respondents agreed that there is no obligation in activity while 12 respondents stated that there is an obligation. The latter were asked what kind of obligation and who enforced them, they stated that they were obliged to protect forest, pay rent and practice the rule and regulation. The internal rule and regulation, which was prepared by the community participation and consultation guide them how the community should economically use the forest.

All these participatory approach impressed them so that they gain confidence on the project. In fact, they suspect the project will phase-out and the situation will reverse.
They were asked whether there was any loss after the appearance of WAJIB, 74 respondents (82.2 percent) reacted *negatively* whereas 16 respondents (17.8percent) responded they loss the opportunity of excessive utilization of forest product, limited to graze land by other

WAJIB group etc. Therefore, the impression comes from participation of community in decision-making and the little loss and the huge benefit the society achieved after establishment of WAJIB approach.

5.4.8. Income difference

Income difference is also one of the variables, which has contributed in participatory forest management. However, in the case of IFMP Adaba-Dodola WAJIB approach, income difference has less impact on participation. It is found out to be that 82.2 percent of the respondents reported that, there is a significant income difference within the members and the rest 17.8 reported there is slight income difference. However, there are 11.1 percent of the respondents accepted that participation in forest management is determined by the level of income. The remaining 88.9 percent of the respondents assured that eventhough there is significant difference in level of income or wealth within their block members, there is no difference in the activity to be accomplished on forest management.

The reason why wealth variation does not contribute to difference in participation is that most of their participation is evaluated on the bases of controlling the forest and taking part in discussion of the members and the project officers call. The management prevents the forest from destruction that involves protecting external illegal users of forest product and grazing by externals. The internal rule and regulation limit the member's unwise and irrational utilization. Therefore, the members have a duty of protecting the forest in any case and also they have a program where and which day and night the forest will be guarded by some mini groups (4 - 5 people per day). Some of the forest blocks hired forest guards but still the members' patrol through the forest. In such case all of them do have specified duties and responsibilities so as to develop accountability to any problem appear on the day specified and arranged to them.

5.5 Factors that hindering the progress of WAJIB members participation in PFM

There are many factors that could inhibit people motivation toward the care they give to the forest in their surroundings. These factors sometimes have an indirect impact so that it is difficult to stat all. It is very clear that the enhancing factors of people participation are the inhibiting factor when they are in a reverse situation. That means, if people are inhibited to use the forest for their consumption and some commercial purposes they will develop offence

5.5.3 Payment of forest use rent

According to 11 respondents, forest use rent is one of the major factors that hindering the progress of people's participation in PFM. There is an agreement made between the WAJIB members and the project owner (IFMP) to pay forest use rent. The project owner believes that, the rationale behind this payment is the equity consideration. The forests were the public property, which were administered by the PAs or communities in the PAs. But now the ownership rights are handed-over to only WAJIB members except the PAs administration do cooperatively in controlling and take action on request. To compensate such inequality, the users should pay the rent so that the rent will be shared to the PAs.

Even though this is the rationality of paying rent, and the contract agreed up on is there, some of the WAJIB members resist paying the rent. They rise the question, *why are we obliged to double rent payments (land use rent and forest use rent, we are the guard of the public forest, we should be paid rather, why do we pay for the resource we contribute.*

It is difficult to say this is the critical problem. But the problem lies in convincing them and bringing the behavioral change. There must be an effort to be exerted to convince them, the right of ownership on the forest, which was the whole community property.

As it in stated above the people need dual advantage, the farmland and forest use right. They understood the inequality of accessibility to resource. But they are not in a position to contribute something to the use they get from it. They never need to accept the objective of equalizing through collecting rent from forest users and adding to Kebele revenue or capital for various uses.

In fact, we can understand that the people are not ensured or guaranteed the property right on forest. Their question is related to the concept that forest is a public property so that the use right currently given to them has no longer life in the far coming. Thus, the need for institutional strength is the important determining factor that develops the confidence of community.

5.5.4 Lack of incentives

There are 6 respondents who stated that lack of incentives is one factor that hinders their participation in participatory forest management. Some of the informants related the

incentives with rent that they pay for forest use. They stated that *as far as they look after the forest day and night, they should get incentives (monetary or in-kind), but they should not pay rent*. These people have self-centered interest. They do not consider the benefit they are currently getting out of the resource that is the common public/common property.

5.5.5. Doubt regarding realization of objectives and continuity

Less number of respondents has a suspect on realization and life of the project as a determining factor for people participation. Only 6 respondents mentioned that having suspect is one hindering factor in people participation in the project. Suspect could arise due to the statement stated in the contract, *the contract is cancelled and all FODWA members will be expelled from the forest area if the forest cover reduced. If the government for some reason needs the forest block in the future, then the FODWA is entitled to get an increment compensation including coverage of expenses for resettlement* (Contract Document 2000). According to them, the project may phase-out so that all the effort exerted come with out any result. One key informant stated, *today the IFMP convinced us but in the future the government could displace us after the forest get improved, or there could be mechanized loggers to remove us and industrialize the forest.* As the conductor of the study observed, the communities are not sure *the forest is their own property if the project does not exist*. Some informants explained that *if the project phases-out, the agricultural bureau will take over the responsibility*. They stated that *the bureau is highly bureaucratic, it uses a top-down approach, follows long and lagging mechanisms in treating people and accomplishing its tasks*. So *we cannot exercise our right and authority, which affects forest management, if the district agricultural bureau handed over the responsibility and task of IFMP*. According to one key informant, *people consider the approach as a kind of establishing landlord system on forest resource ownership right. It is also difficult to maintain the current success if government might fall, so that there could be a great damage during transition period. He added that unless we are ensured 100 percent use right on forest resource it is naïve to think that the objective of the project can be achieved.* As one other key respondent stated, *I suspect that there could be a great damage if government falls down. The IFMP or GTZ advocate the WAJIB approach in conserving the forest. But we are not guaranteed of the ownership right at policy level and by district natural resource and conservation office. Another respondent also stated, I suspect that the government enforces to be limited to farmland and house that we have outside the forest, and this could inhibit us from using the forest (violating our use right).*

As it is explained before, the IFMP is a joint agreement made between GTZ and Ethiopian government via Oromia Regional State Agriculture Bureau. There are employees of Regional Agriculture Office in the IFMP staffs. The whole process is done by joint action.

However, the communities consider every activity is the effort of GTZ. When they were asked who provide them information about deforestation, 92.2 percent of the respondents said GTZ does, while only 8.9 percent of the respondents said government officers (district agriculture office). The IFMP staff composes both government employees and GTZ employees. This shows that even though there are some IFMP staffs that are responsible to specified forest block as a block warden and give technical support to the community in the process of establishing and functioning the project, the community considers all this activity as the only effort of GTZ. The problem lies in lack of awaking people to the joint action of the project and role of the government on participatory forest management activity.

The major issues that lessen the confidence of community on the approach lie on absence of granting ownership right at policy level. Moreover, the problem somehow lies on the past history of nationalization of the properties. If people are guaranteed to the property right on forest, no matter the project exist or phase-out, they are likely to protect the forest as their own personal possessions like house, private tree, cattle or other important wealth.

5.5.6 Lack of water

Out of 90 households covered in the survey, 13.3 percent of the respondents indicated that lack of water is one reason that inhibits the people participation in participatory forest management. According to them, during the dry season there is no water for animals. So people migrate from the forest area and cannot properly manage the forest. Moreover, as they indicated absence of water has a negative impact on planting seedlings.

However, the researcher observation goes the community seeks pure water for their animals. The question therefore, is not as real problem on participation or management but as an appeal to be provided water supply by government or the project. In fact, providing such kind of infrastructure is the objective of integrating sustainable development activities. So it is a rationale to do so by cost effective and cost sharing mechanisms.

5.5.7 Others

Out of the total individuals covered in the survey, 8 respondents (8.9%) stated some other factors other than what are mentioned above. These other factors include absence of support by Kebele Administration, court and police institutions. This depicts the absence of measures on illegally clearing of forest. They refer to the PAs administrators, police and court's failure to take appropriate action on individuals to be blamed or accused to the damage over forest or tree. According to some informants, the policy, law and regulation that enforce to take an action on illegal users and traders are very weak. For example, the punishment taken on illegal users by the court is very insignificant. The WAJIB complain for the court makes some group of community who are illegally engaged on forest destruction are set free from any action. There is less cooperative effort by police and court in taking appropriate action on exploiters of the forest treasure.

When there is no one accused of in his irrational action on forest or tree, if there is none works together with WAJIB in management activity, and if the policy and institutional frame-work does not supports the approach, the management will loosen its strength and consequently the damage could be more sever than ever.

Another variable that has increased uncertainty of the community on sustainability of the current exclusive right on forest is the number of membership which is limited to 30 household per forest block. The cause for such fear emanated from the high population growth rate. Currently the carrying capacity of forest assumed to be 12 hectares to one household and 30 members per a forest block, which comprise an area of 360 hectares. However, majority of the people particularly the females are uneducated. There is no family planning program developed. Many people are happy to have many children. People need many children for many reason particularly, for their labor, to minimize the risk of reducing the number of children because of death etc., are some of the factors that encourage people to have many children. There are 461 WAJIB members within the two PAs or Kebeles. These 461 individuals have 2814 families, and 6.11 families per individual member. Thus, when the youngsters reach for owning their family within the forest area, what could be the fate of the members in the block, and what will be the fate of the forest itself are some of the questions that are not answered yet.

Polygamy is also one of the features in that area which also contributes to high population growth rate. Furthermore, the household is registered to WAJIB members as one exclusive household but because they have dual living residence, they provide the necessary forest product to their household, which is found outside the forest area.

5.6 The impact of the project on forest improvement

The project has started its activities since 1995 by adopting different approaches to save the forest from destruction. But there were no promising results as such. The WAJIB approach has started its activities since 1998 at very few pilot villages in the forest, which we call, forest block in Barisa PA. Eventhough it is difficult to conclude there is significant achievement based on such very short period of time, one can see some kind of fortune in the future if the existing situation continued. The most observable result of the project effort is that, *the rate of deforestation has reduced and there is an improvement in the regeneration of harvested trees and growing of young seedlings under large trees and forest.*

Before WAJIB was established, the forest was a free access to everybody interested and so any one could collect it. Almost all, 89 respondents reported that the forest stock had declined due to excessive exploitation. There were sever exploitations or destructions going on before the establishment of WAJIB. Most of the informants like to explain the past situation, which had been in effect since the coming of the Derg to early establishment of the current approach. According to them, many people had come, not only from adjacent village/Kebele and town, but also from far distance places like Wabe and Assassa, to clear the forest for sale without taking care for the resource. The damage was not only confined to the tree intended to be cut but the bush and young tree growing under the large tree were also damaged. There was inefficiency in utilization where the branch left had no use for anything. The exploiters come with their pack animals to transport the tree so that there were overgrazing in the forest too. Most of the respondents regretfully indicated how much their cattle had suffered from failure to get grass and water because their animals competing with animals came from elsewhere for transporting what was collected by the illegal users.

As a result of these and others, many people strongly complain that the area was cleared and changed to the extent of treeless farmland or grazing land and the high forest was disturbed by exploitation within one to two past decades.

relief of forest stock. Remember that when we say the deforestation rate has been checked-out, it does not mean in absolute terms. But it indicates that cutting main trees or economically high valued trees and the growing trees have minimized except for some special purposes, which shall be decided by the members. There is no limit to use dead plants and branches for fuel purpose. Here, the approach has strong protection because the closest people to the forest have better possibility to control the forest. Moreover, the approach ensured the people of use right, which accompanied with accountability.

The Adaba-Dodola high forest has defined the owner right and accountability to the community. The controlling direction of forest changed from government to the community, i.e., common right, which will allow access to everybody, has been changed to some defined group of community. The duty and responsibility of the community has clearly been defined. Thus the number of people cutting the tree is minimized, the amount of forest product off-take has been reduced, and the numbers of cattle intrude to the forest is reduced. As a result, there is a promising regeneration of trees/forest that has been harvested. It has been observed in many parts of the forest that there are many seedlings growing especially ***Juniperus procera or Tid*** under the big trees particularly eucalyptus tree in the forest, particularly, in Sokora. In this forest block, there are man planted eucalyptus trees, which are part of the high forest. Under many of the big trees, there are a lot of young growing ***Juniperus procera*** seedlings or plants, which look like human sawing seeds. When they asked about the very reason, the staff and some communities from the WAJIB members told that this is the result of protection made for the forest from animal grazing, and excessive exploitation being under taken.

Regarding the information level about the existing deforestation problem, majority of the respondents have information about the extent of deforestation going on just around their surroundings before the WAJIB approach was not adopted and when the forest was under the state control. Accordingly, 41 respondents know there is sever deforestation and 12 respondents know there is only some deforestation, and 3 of the respondents answered there is no deforestation. The rest 34 respondents do not know whether there is deforestation or not except in their territory.

There is information gap over the respondents based on their educational level. There is a positive relationship between educational level and the knowledge of people about the extent of deforestation in their surroundings. Out of 31 illiterate people, only 25.8 percent know the severity of deforestation. Where as out of 13 people who attended adult education only 38.5 percent know the severity of deforestation. Out of some 34 people who attended grade 1-6, 50 percent, out of 10 people who attended school of grade 7-12, 90 percent, and out of 2 people who attended above 12^{th} grade both of them know that there was severe deforestation in their surroundings where the WAJIB approach in forest management is not established. Thus formal class education is playing a great role in making people aware about the situation of their vicinity and their country as well.

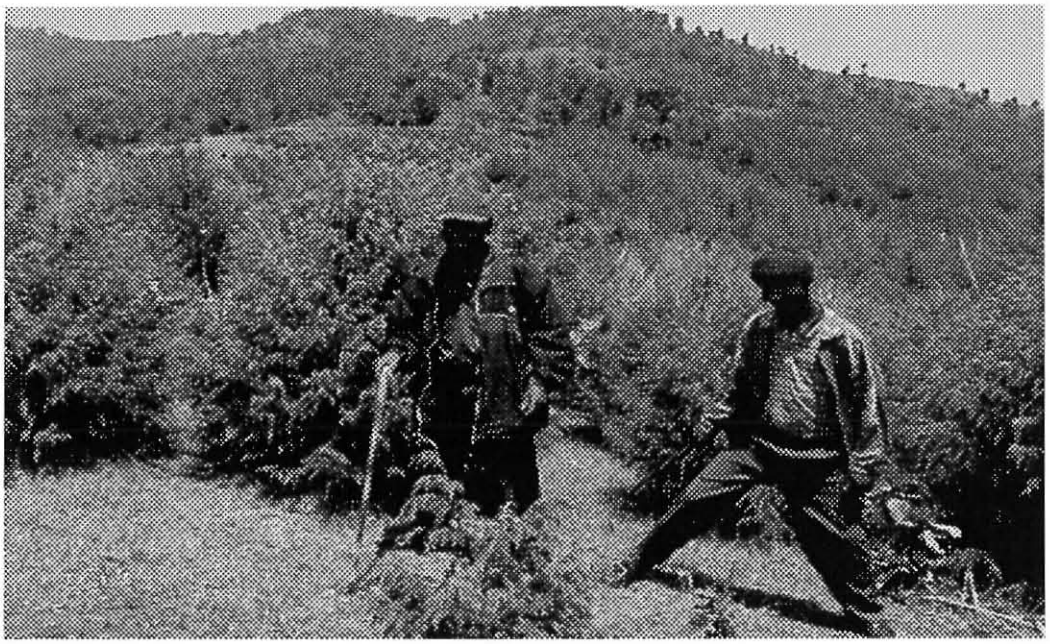
According to the respondents, the situation has become reversed after WAJIB was established. When they were asked what the current situation on forest clearance is. 42 respondents noted that the rate of deforestation has been checked-out and 48 of the respondents said deforestation has been decreased. There are some major factors, according to the respondents, that contributed for such achievements.

Table5.9: Frequency distribution that shows major reasons why deforestation rate reduced

Reasons	No. of respondents	Percent %
Members protection	76	84.4
Securing forest owner right	31	34.4
Number of users reduced	12	13.3
Total	90	

As the above table depicts, out of the total sample population, 76 respondents pointed-out that the deforestation rate was checked because the WAJIB members are protecting the forest and 31 of them said the deforestation rate was checked because the forest gets ownership. Both have the same meaning that the deforestation is protected. Similarly, 12 respondents forwarded that the number of illegal users of the forest has been reduced as one reason for the

Picture 5.1: Picture shows the area of regenerated Juniperus procera in Sokora forest block



Source: Photograph during survey, 2002

As indicated before, 61.1 percent of the respondents had a positive perception towards PFM because they impressed by the improvements of forest inventory and regeneration of the forest, which had been disturbed by improper management or controlled. Securing owner right, strict protection by people living close to the resource, and specifying the users to manageable number are important factors for the reduction of deforestation rate and forest improvement for sustainable use.

VI. Conclusion and Recommendation

6.1 Conclusion

High forest, which was under the state control of, had been the property of the whole community. But it is proved that, the management needs of the forests to protect it from destruction are beyond the current available resources of the state. It is observed that forest management effort by WAJIB members has given great attention to controlling activity but ignored re-plantation and nursery development within the forest. However, if forest to be improved and its sustainability to be attained, it is necessary to give attention to plantation and nursery development within the forest and outside the forest area. It is observed that people of WAJIB members have involved in sharing ideas, planning process, and decision-making process. This trend must be maintained.

The findings show that majority of WAJIB members have positive attitude towards PFM/WAJIB approach. Some of the major factors that develop such feeling are the decline of forest exploitation rate and improvement of regeneration of harvested trees. This effort should not be left to WAJIB members only. It needs multi-dimensional effort by the whole community, local government (Kebele Administration) police and court. Moreover, the powers devolved on the community, authority to decide themselves and accountability, are other factors that make the WAJIB members to have a positive view towards PFM. However, most of the people highly relied on the support of IFMP. They feel that if the project withdraws its hand the current achievement in forest protection will not stay in a position to remain as it is with the effort of the members only. Thus, enabling the community to run the management activity independently has to be done.

The findings show that forest conservation will be effective if the community share the responsibility, accountability and be ensure the right to use by specifying the forest to specific groups who are responsible to manage the forest and possibly be accused for the loss of forest. To manage the forest resource at a sustainable manner, there must be a clearly defined property right so that some must be excluded from using it while some others must be granted the ownership right. But the number of users should be balanced with the carrying capacity of the resource. Under the circumstance of clearly defined accountability and empowerments, there is a positive contribution in ensuring wise utilization of the forest. This

could be realized if there is a contractual agreement that enforces the materialization of the sustainability of utilization and effective protection of the forest. Therefore, the problems of over utilization will be overcome through the collaboration of government with forest dwellers.

Granting ownership right on forest resource to some specified groups of people and limiting the number of users to a manageable number are highly substantial. Giving the member with ownership certificate will encourage their self-initiative to manage the forest. However, still the communities have fear of losing ownership right as deemed necessary by government. The problems arise because there is no framework that ensures forest property right at a national level. One can see that the involvement of the community has so far directly correlated with securing an authority over management and utilization of forest.

Moreover, three important things are considered to be determining factors in participatory forest management. The first one is related to the decision the project implementing approach. Bottom-up approach, which leaves decision to the people on their own issues, is one important motivating factor in PFM. Next, considering the social contact between the communities that is homogeneity of people living together. This could help a lot in doing cooperatively so that there will be no significant difference in taking action. Good social contact will develop agreement between the communities for the achievement of similar objectives. Finally, there will be a potential damage if things get changed in this dynamic economic, political, social change. Unless conflict is settled on time, there could be a danger on the existence of the forest. The assurance of property right must clearly answer the question of ownership right on forest and land. Legal institutions must be strengthened in order to protect the community and private right and, the rule and regulation.

In general, participatory forest management strategy will be a feasible measure that could ameliorate the problem of forest destruction and it is believed to be successful in Ethiopian context. However, in replicating similar projects, NGO's and government organs should clearly understand the major factors that enhance active participation and factors that limit community involvement in participatory management system. In this regard, securing forest use right, community empowerment (devolving authority, responsibility and accountability), brining about behavioral change of the community through awareness creation on forest conservation practice, practicing sound bottom-up approach over decisions by direct

involvement of people in all stages of participation and arranging the homogeneous group collection based on historical background are the most important variables that must be given high attention to arrive at active participation of people.

6.2 **Proposed Recommendations**

1. The better achievement of IFMP pilot project is the result of strict control of WAJIB members in the sense that it gives a chance for natural regeneration. But planting trees in areas where devoid of trees is unlikely to be given attention. Only giving emphasis to forest protection could not ensure sustaining forest life in the long run. It needs to encourage community participation in nursery activities and plantation of community forestry and individual household tree plantation particularly out side the forest. At a household and community level they need to establish their own woodlots at convenient places for easy access, which greatly reduce the deforestation pressure on natural forest. In contrast some individuals in the forest area intended to plough in their compound but by the contract it is not allowed. Strict protection for agricultural expansion in the forest area has to be practiced.
2. Effort must be exerted to awaken the whole community about the economic and ecological benefit of forest. Also creating public awareness about economic and ecological cost and benefit of forest resource is necessary. This can change the existing negative attitude of non-WAJIB community towards the approach.
3. There should be integrated activity in rendering economic and social infrastructures in addition to forest management activity. The project as well as the government should encourage off-farm activities to generate household income and supplementary food sources for forest dependent community and farmers for instance small scale industries like bamboo technology, beekeeping, strengthen the eco-tourism activity; providing technology that reduces the consumption of fuel wood etc. Supporting any poverty reduction strategy (by the project) must be taken as special interest of the project and the government.
4. There should be some kind of short-term appropriate incentives approved by rule and regulation irrespective of the market oriented economic policy of the country. Even though this is a controversial idea which couldn't be the solution in the long run, it helps to improve the forest development till things get right in the future by having clear cut policy which would define how to use forest as stated in recommendation number nine

below. The incentives could enroll anyone from both WAJIB and non-WAJIB members who really contribute for forest conservation and development.

5. There should be strong effort by the project enforcing realization of forest policy, rule and regulation that protect the forest from damage.
6. Executing this management approach or program to all areas in Bale Mountains is needed. In doing this, avoiding the shortcomings seen in the process and promoting the strength seen in the process is important. This is because people are informed that there will be restrictions of cutting trees by establishing WAJIB approach so as some illegal users compete for cutting more trees.
7. Putting the national population and environmental policy into practice should be given attention both by the project and the government. Reducing population growth rate living outside as well as inside the forest through multi-faceted effort by government, NGO's and other concerned stakeholders could sound more. These efforts could comprise promoting education to rural areas particularly girls which reduce early marriage and promoting the practice of birth control, enhancing gender equality particularly equal access to school, promoting family planning to come with attitudinal change in the community to have low number but better quality of children. Additionally, enforcing the application of marriage law which supports marriage at 18 for both sexes, protecting the forceful kind of marriage or abduct of the girls namely '*buti*', in Oromiffa language, changing the attitude of people on the cultural value of polygamy in the short term and designing policy that discourages polygamy and having many children in the long-term.
8. The community should be provided with security of tenure over forest resources and so awakened by the law that has granted them with forest use right for the benefit of the existence the forest itself. The community need to be given more responsibility and authority to exclude other users. Those people who are granted ownership right should get recognition in light of other society members or non-WAJIB members. The WAJIB members would be assured of the ownership right over the forest. The community must be aware of their rights and obligations to effectively manage the forest. Ownership right must be guaranteed at national level by the law after agreement signed, on condition that the forest is sustainably utilized. This may solve the problem of suspicion and fear of the people on forest and on their farmland ownership right and lack of confidence over the projects life. It also reduces the tree consumption by the forest dwellers and non- forest dwellers. To ensure effective operation of the project, an

institutional structure must be in place at national, regional, and local level. There should be legal framework at national level by the policy, which supports the participatory forest management. An institutional structure, which can give technical and financial support, must be in place at national level to ensure effective operation of the project.

9. In the long-run, the tree should get value not on the basis of current distorted market price of tree, (it can be possible to say non-determined price), but on the basis of economic cost/opportunity cost. *Opportunity cost can be determined by price of tree product substituting goods like plastic, fuel, electricity, and iron materials. Environmental consideration should be included in valuing the tree. Enforcing forest users to pay economic cost will likely discourage irrational forest exploitat*ion.

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Annex 1

Addis Ababa University, MA Program in RLDS

Household Socio-economic Assessment Survey Questionnaire

The objective of the Questionnaire: it is designed for the purpose of gathering information from the grass-root participants regarding factors affecting peoples participation in participatory forest management the case of IFMP Adaba-Dodola, Bale zone. Your information is critically important for this research output as well as future forest management. Please provide accurate information.

***Instruction**: Enumerator should use " ✔ " mark.*

PA_____.

Date of Interviews_____. Enumerator Name_____.Code No____.

I. Personal Information

1. Name……2.Age…… 3. Sex……..
4 .Educational level(Grade complete)……
5. Marital status
   1. Single 2.Married 3. Widowed
6. Ethnicity
   1.Oromo 2. Amhara 3. Other (Specify)……
7. Religious Affiliation
   1. Muslim 2. Orthodox 3. Others (Specify)……
8. Birth place
   1.Adaba/Dodola 2.other place
9. If your answer is 2, for how long you lived here? ……
10. Major occupation of households
    1. Crop farm 2. Mixed farming 3. Livestock 4. Others (Specify)……

II. Level of participation

11. Do you practice what the project coordinator recommends to do?
    1 Fully 2. Partially 3. Never
12. List what things are recommended.....
13. Do you attend the meeting called by the program coordinator?
    1 Fully 2. Partially 3. Never
14. Do you pay rent for which you utilize forest?
    1 Fully 2. Partially 3. Never
15. How do you evaluate your participation in collective action in forest management?
    1 Very actively 2. Actively
    3. Lese actively 4. Not involved

III. Perception of people towards participation in NRM

16. What is your perception towards PFM in conserving forest?
    1 It is very important
    2 It is somewhat important
    3 It is not important
17. If your answer for Q.16, is option 1, what could be the reasons?
    1 .It gives Authority (power) to the community
    2. It create feeling of accountability
    3. It reduce deforestation
    4. There is increment of forest inventory

5. We have right to use the forest product
6. Others (Specify) _____

18. If your answer for Q, 16, is not important, what do you suggest as the best means of conservation of high forest. (Please rank them in order of importance)
    1 Sole government control
    2 Privatizing to household sector
    3 Privatize to private investors
    4 Sole community Control but no intervention from outside
    5 Community and NGO's partnership
    6 Indigenous institutions
    7 Other (Specify)----------

IV. Areas of participation

19. In which activity did you participate in forest management? (Arrange them in order)
    1. Nursery 2. Plantation 3. Protection of regenerating trees
    4 Protection of harvestable trees 5. None 6. Others (specify) --------
20. In which stage of participation you involved? (Rank them in order)
    1. Idea generation stage 2. Planning stage 3. Decision-making
    4. Controlling 6. None
21. If you choose planning stage for Q.20, for how many times you participate in discussion for planning forest management
    1 Always 2. Many times 3. Few times 4. Only one times

22. If you choose decision-making stage for Q.20, for how many times you participate in discussion for decision making about forest management
    1. Always 2. Many times 3. Few times 4. Only one times

23. How do you evaluate yourself in influencing decisions?
    1.Strong 2.Weak 3.Never

V. Factors enhancing and inhibiting the participation of people.

24. Do you believe that the current land tenure in Ethiopia has a link (any relation) with forest management ?
    1.Yes 2. No
25. If yes for Q. 24, what is relationship do you believe?.....
26. Do land tenure affected your participation?
    1.Yes 2. No
27. If your answer for Q, 26 is yes,
    1. Strongly enhance your participation 2. Slightly enhance your participation
    3. Strongly hinder " " 4. Slightly hinder " "
28. What was the level of forest stock around your living area before IFMP decentralized the power to community management
    1.Decreasing 2. Increasing 3. Remaining the same
29. What was the level of forest stock around your living area after IFMP decentralized the power to community management
    1. Checked 2. Decreasing 3. Increasing 4. Remaining the same

30. If your answer for Q.29 is 1 or 2, what are the major reasons?
31. Have you reduced cutting tree after you organized to WAJIB?
    1. Yes 2. No
32. If **yes** for Q.31 why,.....

33. If **no** for Q.31 why.....
34. Have you ever been informed about forest use?
    1. Yes 2. No
35. If yes for Q.34, who informed you?
    1.. NGOs like GTZ 2.Government officer 3. Students and teachers
    4. Others, (Specify).....
36 . What is your knowledge about deforestation?
    1. There is sever deforestation going on
    2. There is some deforestation going on
    3. There is no deforestation gong on
    4.. I don't know any about deforestation
37 . If your answer for Q.36 is option No.1, are you encouraged to forest management because you feel there is a problem?
    1..Strongly 2. Slightly 3. No
38 . If your answer for Q.36 there is no deforestation, do you feel that it hinders your participation?
    1..Strongly 2. Slightly 3. No
39 . Do you have any knowledge about the effect of deforestation?
    1. Yes 2. No
40. If ***yes*** what are they?.....

41. How do you know?
    1 .Learning in school 2. Information from mass media
    3 .Training by government organs 4. Others, (Specify).....
    5 .Learning from IFMP
42 . If your answer for Q. 39 is **yes**, what is its impact from your experience?
    1..It has strong impact on participation. 2. It has less impact on participation

43 . Do you expect any benefit from participating in forest management?
    1. Yes 2. No
44 . If your answer for Q. 43 is yes, what are the benefits you expect. (Put them in rank)
    1. Monetary benefit from forest product
    2. The right of using forest for housing and fuel
    3. Physical existence of forest use in the future
    4. Mental satisfaction
    5. Benefit from soil conservation and watershed
    6. Others, (Specify).....
45 . Do the benefit you expect initiates you to participate in forest management
    1. Strongly 2. Slightly 3. Nothing
46. Is there any losses you have encountered because of participation?
    1. Yes 2. No
47. If your answer for Q.46 is yes what are the losses you have encountered? (Put them in rank of order)
    1. It limit cutting tree
    2. limit farm land expansion
    3. Limit using forest for grazing livestock
    4. It add extra work
    5. The cost of participation is greater than the cost of participation
    6. Others, (Specify).....

48. What is the interest of your group looks like on the issue of forest management
    1. There is great similarity within a group
    2. There is less similarity within a group
    3. There is great differences within a group
    4. There is less differences within a group
49. If your answer for Q. 48 is 1 or 2, do this similarity of interests.
    1. Strongly enhanced the participation of the group
    2. Slightly enhanced the participation of the group
    3. No effect on participation
50 . If your answer for Q. 48 is 3 or 4, is there difference of interests
    1. Strongly inhibited the participation of the group
    2. Slightly inhibited the participation of the group
    3. No effect on participation
51 . Is the livelihood of your family income depend on forest and forest product?
    1 .Fully 2. Partially 3. No
52. If your answer for Q. 51 is 1 or 2, do this dependence on forest had initiated to participate in forest management
    1. Strongly 2. Slightly 3. No effect
53. If your answer for Q.51 is option 3, do you think that having other source of income other than forest?
    1. Strongly encourage participation
    2. Slightly encourage participation
    3. Strongly discourage participation
    4. Slightly discourage participation
54 . What is the cultural value or belief of the community towards the forest
    1. Protecting forest from unnecessary damage
    2. Sustainable use of forest resource
    3 Using as much as needed for personal consumption
    4. There is no relation with forest
    5. Others, (Specify).....
55 .Do this existing cultural value has any impact on your participation
    1 .Yes, it encourages 2. Yes, it discourages 3. No impact
56 . If your answer for Q. 55 is yes, state the relationship between the value and participation.....
57 . What is the income distribution within the group you belong to looks like
    1. Significant differences 2. Slight differences 3. fair distribution

58 .Do you believe that the income difference causes participation differences
    1. Yes 2. No
59. If your answer for Q.58 is yes, answer the following
    1 . That higher income group participates actively than that lower income group

    2. Those lower income group participate actively than those higher income groups

    3. Those medium income group participate actively than those lower and higher income groups

V. General Questions

60 .Does the participatory forest management under the WAJIB approach
    1. Create a great sense of accountability to the forest
    2. Create less sense of accountability to the forest

3. Not create sense of accountability to the forest

61. Does the participatory forest management under the WAJIB approach
    1. Ensured empowerment of individual people
    2. Ensured empowerment of the group
    3. Not ensured empowerment at all
62. Do trust PFM approach as a vehicle for sustainable forest management?
    1. Yes 2. No
63 .If yes for Q. 62, had the participatory forest management program developed this feeling? 1. Yes 2. No
64. What is your decision power in discussion?
    1. Acceptable 2. Sometimes-acceptable 3. Not acceptable
65. If your answer is not acceptable for Q.64, who is the most influential.
    1. Program coordinator 2. Government officers
    3. Other stakeholders like NGOs and scholars
    4. Others (specify).....
66. Do you think that your decision-making power affect participation level?
    1. Yes 2. No
67. If yes for Q.66, is there a case where you are affected by your decision-making?
    1. Yes 2. No
68. Is the IFMP gives priority to the community interest?
    1. Yes 2. No
69 .What is your performance in participation compared to others?
    1. Good 2. Average 3. Poor
70 . Do you think that the participatory forest management has shortcomings?
    1. Agree 2. Not Agree
71 .If agree to Q.70, what are the major shortcomings?
72. Are there local institutions in this area?
    1. Yes 2. No
73 .What is their contribution in participation of the people?
    1. They are initiators 2. They are passive toward participation
    3. They are hindrance to participation
74 .Does participation in a group has any forces or obligation?
    1. Yes 2. No
75. If Yes for Q.74, Who force people?.....
    And how they oblige people?.....
76. What are the major factors that enhance yours participation in forest management? Please list down by priorities.
77. What are the major factors that hinder your participation in forest management? Please list down by priorities.

Modified date 8/11/95 9.32 (l.t)