

INDIRA GANDHI NATIONAL OPEN UNIVERSITY

STUDIES ON NATURAL RESOURCE BASED
CONFLICTS: A CASE OF BURJI AND GUJI
COMMUNITIES AT SNNPR, ETHIOPIA

A THESIS

Submitted to Indira Gandhi National Open
University (IGNOU) in partial fulfillment of the
requirement for Master of Art Degree in Rural
Development

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October 2014

HAWASSA, ETHIOPIA

DECLARATION

I hereby declare that the Dissertation entitled STUDIES ON NATURAL RESOURCE BASED CONFLICTS: A CASE BETWEEN BURJUI AND GUJI COMMUNITIES at SNNPR, ETHIOPIA submitted by me for the partial fulfillment of the M.A. in Rural development to Indira Gandhi National Open University, (IGNOU) New Delhi (St.Mary’sUniversity)is my own original work and has not been submitted earlier either to IGNOU or to any other institution for the fulfillment of the requirement for any course of study. I also declare that no chapter of this manuscript in whole or in part is lifted and incorporated in this report from any earlier work done by me or others.

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ACKNOWLEDGEMENTS

First of all, I would like to give thank for my almighty God the only good helper and I need to never forget that. He helped me in every success, every obstacle, every loss, every achievement, every fall and every moment of every day.

I would like to acknowledge the assistance of persons and organizations for the success of the study. My special thanks go to my supervisor DrMengistuHulluka. He has guided me through all my work; scarified his invaluable time reading all field report; and critically commented on all the thesis.

The cordial support I have received from my family specially my beloved wife W/roWubitu Tadesse; she shared all household responsibilities, taking care of our young kids (Niftalem ,Naod and MeronAssefa), encouragement during data collection, tabulation, analysis and interpretation and she shouldered me to the final in all other conditions.

Several individuals in the Burji and BuleHora have also assisted me in the course of data collection for my study. Among them Amare Boru, HotesaWariyo for facilitation, data collection, I would like to thank all who directly and indirectly supported the study in the study areas persons, officials and institutions. It is also necessary to thank all who have shared their time, energies and experience while writing this thesis. At last not least, my brothers Alemayehu Nana, Tesfaye Nana and SebaNana and also MihiretuMeskeremfor their moral encouragements.

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Acronyms

A.A.U:	Addis Ababa University
CSA:	Central Statistical Agency
DRC:	Democratic Republic of Congo
JHPIP:	Johns Hopkins Population Information Programme
SNNPR:	Southern Nations, Nationalities and People's Regional state
WRI:	World Resource Institute

ABSTRACT

This study on conflict among farmers attempted to explore one area of the problems of local development, which is local instability. Conflict hampers local and national development by mainly affecting rural agricultural, pastoral and animal productivity. Especially in conflict prone area where the conflicts are of higher magnitude the livelihoods of the procedure communities are threatened to a great extent.

This study on the low land of the South Ethiopia and particularly on Burji and BuleHoraworeda of Segen Area zone and Borena zone has explored the nature and causes of resource based conflicts and traditional conflict resolution mechanisms in study area. The prime assumption at the begging of the study was that as in many lowland areas where natural resource scarcity and population pressure dictates the relationship among farmers sharing a common production, the major causes of conflict in this area would resources scarcity and population pressure.

This thesis, therefore, assessed the nature and cause of conflict, the dynamics of the resources governance, the impacts of agricultural activities on environment and explorers traditional conflict resolution mechanism in Burji and BuleHoraWoreda/District. Using descriptive survey type of research method. The study employed survey questionnaires, interviews and focus discussion methods in addition to different published as well as up-published materials. The data gathered was analyzed using descriptive statistics. MS-EXCEL program was used to analyze the data collected through questionnaires. The qualitative data was analyzed and discussed qualitatively.

The study also revealed that natural resource scarcity and population pressure, coupled with other factors like land possession, lack of land use plan and good governance of natural resource, was found to be the causes of conflict among communities. The conflict in the study area was found to be of higher magnitude both in terms of recurrence and intensity, which worsens with the aggregation of resource scarcity, in the absence of sustainable environmental governance and conflict resolution.

CHAPTER ONE

1.1 INTRODUCTION and BACKGROUND

The exploitation of natural resources and related environmental stress has become a significant driver of violence in Africa. Civil wars such as those in Liberia, Angola and Democratic Republic of Congo (DRC) have been centered around high value resources like timber, diamond, gold, minerals and oil. Other conflicts such as the one in Darfur revolved around the control of scarce resources, such as fertile land and water (UNEP, 2009). Conflict over natural resources, especially land and water is ubiquitous. In many parts of the world, notably in Africa, discrimination in land access has been an important factor fuelling present social, political and economic tensions. Throughout the continent, customary forms of land tenure and access are under increasing threat from prevailing development orthodoxies and moves to undercut the powers of indigenous social institutions.

Accordingly, a history of conflict, poverty and livelihood insecurity among rural communities has been created and institutionalized. The use of natural resources is susceptible to conflict for a number of reasons, summarized by Hussein K. (1998), as follows: "Natural resources are embedded in interconnected space where actions by one individual or group may generate effects for off-site as a result of biophysical or ecological linkages". According to Homer-Dixon (1991), environmental conflict made explicit when communities establish an immediate logical connection between environmental degradation and the activities of certain social agents. Natural resources are embedded in a shared social space where complex and unequal relations are established among a wide range of social actors. Those actors with the greatest access to power are also best able to control and influence natural resource decisions in their favour (Peet & Watts, 1996), thus paving the ground for conflict to take place.

Natural resources are subject to increasing scarcity due to rapid environmental change, increasing demand, and their unequal distribution. People use natural resources in ways that are defined symbolically, land forests, and waterways are not just material resources people compete over, but are part of a particular way of life (farming, ranching, fishing...etc), it is a set of social difference as identity. Such symbolic dimensions of natural resources led themselves

to ideological, social and political struggle that have enormous practical significance for the management of natural resources and the process of conflict management. For instance, resource use conflicts were rampant in Southern Regional State conflict among or between zones to zones, zones to special woredas, woredas to zones, special woredas to woredas, regions to regions, and within zone, special woreda and woreda and also even between kebeles&withinkebeles or districts with relations to scarcity of farm and grazing land, water and landed natural resources; such type of conflict between DebubOmo& Bench Maji, Basketo and DebubOmo, Oromiya and Konta, Alaba, Amoro, Yem, Sidama, Hadiya, Gurage, Silte, Kaffa, DebubOmo, Gedeo conflict between/among GamoGofa and Konso, Derashe are major one's according to Strategic Plan of Conflict Resolution of the Council of Nationalities of the South Regional State (2012-13).

Poor farm households bear the heaviest burdens of land and water related conflicts for the simple reason that their daily needs and future livelihoods are directly tied to their property rights. Poor small scale holders face a high risk of becoming victims of conflict if their fragile access to land is threatened further. The roots of conflicts are numerous, including; structural or historically based inequalities, economic and social policies and patterns of growth and development; political or local territorial disputes' among communities in competition with commercial interest, overlapping jurisdictions among government ministries; contradictory regulations, such as differences in legal and customary ways of management or mediating land rights.

Thus, this study was focused on natural resource use conflict and the extent to which competition gives rise to small and local community conflict and the ways such conflicts are addressed in local community in Southern Ethiopia.

1.2 Statement of the research problem

The relationship between resource scarcity and conflict has been observed in water scarcity and resultant conflict around the world. That nearly half billion people worldwide are currently facing water shortages (JHPIP, 1998).

The competition over agricultural use of land and natural resources is mounting conflict and per-capita consumption of natural resources is increasing (Ibid). International, national and local community conflicts over natural resources are brewing and could turn violent as shortages grow in Africa as well as Ethiopia.

If there is scarcity of resources, there is competition, environmental degradation and population pressure; so, natural resources will be continuous source of conflict (Ohlsson, 1995). The growing population requires more food, more water, pasture and more agricultural land. Physiographic characteristics and other factors affect the consumptive use of water, pasture and productive agricultural land. This leads to an unequal distribution of resources. And also natural resource governance is therefore characterized by an unjust and insufficient use and this condition creates contradiction and conflict among users (Upereti, 2002). The land use system in Africa as well as in Ethiopia rapidly changing because of increased environmental consumerism, technological advancement, and market intervention and globalization process. As a consequence, over- exploitation of natural resources and environmental services has become a harsh reality. The lack of strong environmental governance to achieve economic and social development leads to natural resource based conflict (Upereti, 2003).

Small scales inter-and intra-conflicts and civil strife characterizes most of the rural area communities (farmer-farmer, farmer - herder and herder-herder) in Ethiopia as elsewhere in East African countries. These small scales communal inter-and intra- group, family or clan and local border conflicts have led to massive losses of human, livestock and properties, and also the environmental resources. Moreover, it produced large number of displaced people. Past research has provided evidence about the causes, nature, actors and dynamics of herder-farmer conflicts in Ethiopia as well as those in the Sub-Saharan Africa (Upereti, 2003).

Burji is one of the woredas in Segen area people's zone, which had experienced a prolonged resource-based conflict with Guji Oromos. The 8 lowland peasant administration had experienced a series of conflict with 2 peasant administration of Guji on land, water, pasture and forest products for more than 20 years that resulted in loss of human life, livestock rustling, property and natural resource distractions.

The regional governments, zonal administrations and local government structures had tried to resolve the conflict within these communities. The government had allocated budget, assigned manpower, and prepared action plan to resolve this conflict. However, the conflict has not been resolved yet. In general, much less is known about the causes of resource based conflict at grass root and community level. Moreover, natural resource based conflict with relation to environmental degradation, population pressure, scarcity of resource and environmental governance and its traditional conflict resolution mechanisms have not been assessed yet. Therefore, this study addresses the causes of natural resource-based conflicts and traditional conflict resolution mechanisms in the local communities.

1.3 General Objectives of the study

The general objective of this study is to explore and analyze the major causes of resource-based conflicts and traditional conflict resolution mechanisms in the local communities.

1.3.1 Specific objectives of the study

2. To investigate the nature and causes of conflicts;
3. To examine the dynamics of the resource governance, resource scarcity and conflicts;
4. To assess the impact of conflicts on agriculture and environment; and
5. To evaluate indigenous and exogenous factors affecting the local interactions.

1.3.2 Research Questions

1. What is the nature of resource based conflicts?
2. What is the dynamics in resource governance, resource scarcity and conflicts?
3. What is the impact of the conflict on agricultural activities and environment?
4. What are traditional institutions to resolve conflict and how people resolve disputes among communities?

5. What are external and internal factors aggravating resource users' competition among local community?

1.3.3 Significance of the study

The study provides general insight on the history of resource based conflict and conflict resolution mechanisms in local community as well as traditional conflict resolution mechanisms of local community institutions, interconnections of conflict and environment, population pressure, scarce resources, and competition for natural resource so that the study will:-

- Introduce better perspectives from which problems of productivity and instability in the area could be understood;
- Assist current and/or future development projects in the area to integrate relevant objects of problem solving(like conflict resolution) based on the findings in the study;
- Realize government policy review with regard to decisions affecting lowland areas, inspire future research activities over crucial factors focused on the study in relation to group, family and individual conflict. This study may also generate information for various purposes and to different consumers;
- Contribute its part to the pool of research conducted on similar issues;
- Contribute towards better understanding of the root causes of resource-based conflict that will provide information to decision makers at local and regional levels in addressing the resource- based conflict and traditional conflict resolution mechanisms.

1.4 Scope and Limitation of the Study

This study specifically focuses on analyzing causes and consequences of resource- based conflict in southern Ethiopia. This specific study entails the case of Burji-Guji communities in Southern Ethiopia regional State.

Accordingly, any of the analysis and the findings of the study are specific to the case area. The study area is selected due to previous knowledge of the researcher about the prevalence of conflict in the area and due to its relative accessibility to conduct the study from the center.

The study had encountered different problems at different time:

1. The financial constraints to provide incentive to respondents;
2. Public officials were sometimes busy and not accessible for interviews;
3. Unwillingness of some persons or not to respond due to the sensitivity of the conflict;
4. Raising different questions, such as, the researcher's identity, the effect of the study in resolving the conflict;
5. Unwillingness of officials; organizations and concerned persons to provide necessary documents...etc

1.5 Organization of the Study

This study has been five chapters. The first chapter described introduction, statement of the problems and objectives; the second chapter comprises a review of relevant literatures, the third chapter deals with the provision of contextual and specific study area background information in relation to the study objectives, methodology, the fourth chapter presented the study findings and discussion; and fifth chapter presented conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Different Perspectives of Resource Conflict

Conflict is taken as a form of interaction between parties in conflict. However, the differences rest in the fact that some adhere to the notion carry a negative, destructive, connotation. Authors such as KarimHussien et al (1998), are identified with such approaches since they try to view conflict as a separate notion to what they called “trade-offs”. According to them trade-offs represent the different interests of different stakeholders or as a conflict of interest between actors which (unlike conflict) can be managed to achieve positive outcomes. On the other hand, others argue that conflict is a form of interaction, which should not necessarily be taken as a negative interaction. They further argue that conflict can be a form of interaction between actors and a form of communication to stakeholders of its causes, consequences and remedies for positive results like new instantiations, new rules of empowerment, development, intervention etc... (Ibid). Review of related literature also reveals that two major perspectives regarding the concept of farmers-farmers conflict. The first of these perspectives notes that relations among farmers have always moved between cooperation or conflict; (Ibid), this perspective seem to imply the existence of natural balance and a lot for external institutions to shift the pattern of relations from conflict to cooperation (Vanderlinden, 2000). The second perspective sees conflict as becoming a predominant form of farm-farm interaction and a concern of development research and practice, and environmental degradation, resource scarcity and population pressure are promoted as a main explanatory variables for the ever-increasing trends of conflict in semi-arid Africa.(Husseini,(1998).

2.2 Different approaches to the study of conflicts among farmers

Within the agreed scope of the problem of farmers-farmer conflict, there are different approaches to the study of the problem. This positive development is basically the result of the multi-disciplinary perspective endeavors to the study of the problem due to pooper attention it

deserved. The following is a summarized review of the discussions by Karin Hussein (1998) on some of the different approaches:

1. **Livelihood security approach:** the recent literature on livelihood security tries to understand disputes among farmers as a result of competition for scarce resources to achieve livelihood security.
2. **Tenure debates, land appropriation and property rights theory:** this approach basically attribute conflicts to prevalence of unclear and unfair tenure systems which fail to recognize the flexibility of the production system. The absence of clear and functional tenure systems is resulting in prevalence of conflicts while preventing the opportunity of different resource users to negotiate for mutual benefit.
3. **The stakeholder approach:** this approach attribute conflicts to the failures of environmental management systems to pay attention to proper representation of stakeholders in the problem.
4. **Historic and anthropological approaches:** the historical approaches have tended to focus on processes underling the evolution of relations among farmers, while anthropological approach focuses on ethnically distinct farming communities by looking intra-conflicts from the angel of value system clashes and intolerance as a resource of conflict.
5. **Political ecology approach:** this approach includes factors like role of the state, elite groups, change in global economy, decision making process in addition to ecological, history and anthropological elements to explain conditions.
6. **The resource scarcity approach:** the proponents of this approach, sees two dominant factors as a resource of increasing conflicts which are population pressure and resource degradation. Homer Dixon (1994) also observed that environmental scarcity acts as a long term 'stressor' as well as and independent cause of conflict. Hence he concludes that with worsening environmental scarcity, farmer-farmer conflict gets inevitably increasing. All the above-mentioned approaches present strong arguments for better understanding of the multi-faceted nature of farmer-herder conflict. But few provide a theory sufficient enough to explain the dynamics of farmer-herder conflict. For instance the political ecology approach has the limitations of presenting explanations for non-politicized

conflicts. It also fails to explain the inherent causes of conflict before the involvement of politics to aggravate already existing conflicts. Empirical evidences on conflicts in semi-arid Africa also show that conflicts are increasing despite acceleration of democratization and empowerment in Africa.

The historical and anthropological approach also fails to explain the current trend of increasing conflicts among farmers and even among herders with common historical and cultural background. The anthropological approach also fails to adequately rationalize the increasing trends among farmers in Africa while, ethnic identities are largest intact. This study follows the resource scarcity approach with its own place context and an attempt to contribute additional relevant factors from the expected findings of the study within the boundaries of the approach. In addition some of the approaches also are found to be relevant supplementing and better explaining the resource scarcity approach. For instance the livelihood security approach gives a crucial explanation about the psychological aspects of the conflicting parties in reference to competition and alienation, inherently caused by resource scarcity, as proximate cause of conflict. Increasing scarcity logically threatens livelihoods of producer groups to develop the psychological status for conflict.

Tenure debates also explain aggravating factors of conflict, which initially is caused by scarcity. The stakeholders and marginalization of disadvantaged group approach are essential to analyze consequences of conflicts among farmers and conflict resolution options.

2.3 Source of Conflict

Early reviews in the field of conflict resolution identified a large number of schemes for describing sources or types of conflict (Fink, 1968; Mack and Snyder, 1958). One of the early theorists on conflict, Daniel Katz (1965), created a typology that distinguishes three main sources of conflict: economic, value, and power.

1. Economic Conflict: involves competing motives to attain scarce resources. Each party wants to get the most that it can, and the behavior and emotions of each party are directed toward

maximizing its game. Union and management conflict often has as one of its sources the incompatible goals of how to slice up the “economic pie”.

2. Value Conflict: involves incompatibility in ways of life, ideology the preferences, principles and practices that people believe in. International conflict (e.g., the cold war) often has a strong value component, where in each side asserts the rightness and superiority of its way of life and its political-economic system.

3. Power Conflict: Occurs when each party wishes to maintain or maximize the amount of influence that it exerts in the relationship and the social setting. It is impossible for one party to be stronger without the other being weaker, at least in terms of direct influence over each other. Thus, a power struggle ensues which usually ends in a victory and the defeat, or in a “stand-off “with a continuing state of tension. Power conflicts can occur between individuals, between groups, or between nations, whenever one or both parties chose to take a power approach to the relationship. Power also inters in to all conflict since the parties are attempting to control each other. It must be noted that must conflicts are not of a pure type, but involve a mixture of sources. For example, union-management conflict typically involves economic competition, but may also take the form of a power struggle and often involves different ideologies or political values. The more sources that are involved, the more intense and intractable the conflict usually is. Another important source of conflict is ineffective communication. Miscommunication and misunderstanding can create conflict even where there are no basic incompatibilities. In addition, parties may have different perceptions as to what are the facts in a situation, and until they share information and clarify the perceptions, resolution is impossible. Self-centeredness, selective perception, emotional bias, prejudices, etc, are all forces that lead us to perceive situations very differently from the other party. Lack of skill in communicating what we really mean in a clear and respectful fashion often results in confusion, hurt and anger, all of which simply feed the conflict process. Whether the conflict has objective sources or is due only to perceptual or communication problems, it is experienced as very real by the parties involved.

2.4 Escalation of Conflict

A final source of conflict is more additional than basic, that is, it comes in after the conflict has started. Conflicts have a definite tendency to escalate, i.e. to become more intense and hostile, and to develop more issues, i.e., what the parties say the conflict is about. Therefore, escalating conflicts become more difficult to manage. The process of escalation feeds on fear and defensiveness.

Threat leads to counter threat, usually with highly stakes at each go-round. Selective and distorted perception justifies a competitive and cautious approach as opposed to a trusting and cooperative one. According to Deutsch's *Crude Law of Social Relation*(1973)-competition breeds competition, rather than cooperation. The self-fulfilling prophesy comes into play. Each party believes in the evil intentions of the other and the inevitability of disagreement, and therefore, takes precautionary action which signal mistrust and competitiveness. Ohlsson, L.ed.(1995). When the other party then responds with the counteraction, this is perceived as justifying the initial precautionary measure, and a new spiral of action and counteraction begins. Through the norm of reciprocity, stronger attempts to control are met not only with stronger resistance, but more contentious attempts to gain the upper hand.

With each succeeding spiral of conflict, polarization grows and the parties become more adamant and intransigent in their approach to the situation. Even though the intensity of the conflict may moderate for periods of time, the issues remain, and a triggering event induces conflictual behavior with negative consequences and the conflict has moved one more step up the escalation staircase. When parties become "locked in" to a conflict they are usually unable to get out by themselves, and the intervention of a third party in the role of arbitrator, mediator or consultant may be required,(Fisher, 1997).

2.5 Level of Conflict

Conflict can occur at a number of levels of human functioning. Conflict in your head between opposing motives or ideas is shown by your "internal dialogue" and is at the interpersonal level.

Beyond that, the primary concern here is with social conflict, i.e. conflicts between they are acting as individuals, as members of groups, or as representatives of organizations or nations.

- I. **Interpersonal Conflict:** Occurs when two people have incompatible needs, goals, or approaches in their relationships. Communication breakdown is obtained an important source of interpersonal conflict and learning communication skills is valuable in preventing and resolving such difficulties. At the same time, very real differences occur between people that cannot be resolved by any amount of improved communication. "Personality conflict" refers to very strong differences in motives, values or styles in dealing with people that are not resolvable. For example, if both parties in a relationship have a high need for power and both want to be dominant in the relationship, there is no way for both to be satisfied, and a power struggle ensues. Common tactics used in interpersonal power struggles include the exaggerated use of rewards and punishments, deception and evasion, threats and emotional blackmail, and flattery or ingratiation. Unresolved power conflict usually recycles and escalates to the point of relationship breakdown and termination (ibid).
- II. **Role Conflict:** Involves very real differences in role definitions, expectations or responsibilities between individuals who are interdependent in a social system. If there are ambiguities in role definitions in an organizations or unclear boundaries of responsibilities, then the stage is set for interpersonal friction between the persons involved. Unfortunately, the conflict is often misdiagnosed as interpersonal conflict rather than role conflict, and resolution is then complicated and misdirected. The emotional intensity is often quite high in role conflict since people are directly involved as individuals and there is a strong tendency tp personalize the conflict (ibid).
- III. **Intergroup Conflict:** Occurs between collection of people such as ethnic or racial groups, departments or levels of decision-making in the same organization, and union and management. Competition for scarce resources is common sources of intergroup conflict, and societies have develop numerous regulatory mechanisms , such as collective bargaining and mediation, for dealing with intergroup conflict in

less disruptive ways. Social-psychological processes are very important in intergroup conflict (Fisher, 1990). Group members tend to develop stereotypes (oversimplified negative beliefs) of the opposing group, tend to blame them for their own problems (scape-goating), and practice discrimination against them. These classic symptoms of intergroup conflict can be just as evident in organizations as in race relations in community settings. Intergroup conflict is especially tense and prone to escalation and intractability when group identities are threatened. The costs of destructive intergroup conflict can be extremely high for a society in both economic and social terms (Fisher, 1990).

- IV. **Multi-party Conflict:** Occurs in societies when different interest groups and organizations have varying priorities over resource management and policy development. These complex conflicts typically involve a combination of economic, value and power sources. This complexity is often beyond the reach of traditional authoritative or adversarial procedures, and more collaborative approaches to building consensus are required for resolution (Cormick et al, 1996; Gray, 1989).
- V. **International Conflict:** Occurs between states at the global level. Competition for resources certainly plays a part, but value and power conflict often intertwined and sometimes pre dominant. The differences are articulated through the channels of diplomacy in a constant game of give and take, or threat and counter threat, sometimes for the highest of stakes. Mechanisms of propaganda can lead to many of the same social-psychological distortions that characterize interpersonal and intergroup conflict (Gray, 1989).

2.6 Resource Competition in the 21st century

As in previous epochs, the world of the 21st century faces a variety of political, economic, social and ecological pressures that threaten stability in many areas of the globe and embody a potential for violent conflict. Many of these pressures are akin to those that have imperiled regional and international stability in the past: ethnic and religious antagonisms, the struggle for dominance between aspiring and established powers, territorial disputes, and

economic competition and so on. It is likely, however, that additional sources of friction and instability will arise in this century, emerging from the distinctive features of the current era. Of these, of the most significant will be global competition for access to scarce or vital supplies of critical resources: water, oil, natural gas, arable land and key industrial minerals (Michael T. Klare 2001).

2.6.1 Facing Resource Competition

The significant role played by resource competition in sparking conflict is evident in many of the recent outbreaks of armed violence, such as those in Aceh, Angola, Chad, Chechnya, Chiapas, Colombia, Congo, Congo-Brazzaville, Iraq, Liberia, Sierra-Leon, Somalia and Sudan. Like all human conflicts, these upheavals have more than one cause; all, however, are driven to a considerable extent by competition over vital or valuable resources: Diamonds in the case of Angola, Liberia, and Sierra-Leon; Oil in the case of Aceh, Chechnya, Colombia, Congo-Brazzaville, Iraq and Sudan; timber and minerals in the Congo; arable land in Chiapas and Zimbabwe. (Gray, 1989).

It is true, of course, that competition over scarce and vital materials has long been a source of conflict. Indeed, many of the earliest recorded wars notably those occurring in ancient Mesopotamia, Egypt and the Jordan River valley were driven by struggles over the control of critical water sources and arable land. Similarly, many of the wars of the 16th to the early 20th century were sparked by competition between the major European powers for control over resource-rich colonies in Africa, Asia, the East Indies and the New world struggles that culminated in the 1st world war. The rise of Nazism and the US-Soviet rivalry of the cold war era tended to overshadow (but not eliminate) the importance of resource competition in the mid-20th century, but the end of the cold war brought this factor once again to the fore, as evinced by the conflicts identified above (Fisher, 1990).

One can argue, then, that the re-emergence of resource conflict in the current period is nothing more than a return to the status quo ante: to the long stretch of time in which resource competition was a dominant force in world affairs. But it is the contention of this chapter that the situation we face today is not just more of the same: it is, instead, a qualitatively different

situation, in which resource competition has assumed a more decisive and central role in armed conflict than has been the case in the past. To appreciate this, it is necessary to consider both the importance of key resources to contemporary human endeavors and the unique pressure on the world's resource base at the onset of the 21st century (ibid).

Some resources are, of course, essential for human survival. All humans need a certain amount of food and water, plus access to shelter, cloth and, in northern climates, heat. At a very primitive level of existence, human societies can function on relatively modest quantities of these materials, so long as their numbers remain few. As societies grow more complex, they require more resources for their own use and to produce trade goods to exchange for the things they lack, including luxury items sought by their elites. Modern means of warfare also consumes vast quantities of resources specially petroleum to fuel the tanks, planes, helicopters and ships that have come to dominate the contemporary battle field. The more developed, urbanized and prosperous society the greater its requirement for all resources of all types. The dilemma that confronts us that as at the dawn of the 21st century is the fact that human consumption of almost all types of materials is growing at an ever-increasing rate, imposing growing and possibly intolerable pressures on the world's existing stockpile of natural resource. Until now, humans have been able to mitigate these pressures by developing new sources of supply for example, by digging deeper in to the earth for metals and oils and by inventing alternative materials. No doubt human ingenuity and the power of the market will continue to generate solution of this sort. At some point, however, the demand for certain vital resources will simply overwhelm the available supply, producing widespread shortages and driving up the price of what remains; in some cases, moreover, it may prove impossible to develop viable substitutes. (There is no known substitute, for example, for fresh water). As resource stocks decline and prices rise, the divide between those with access to adequate supplies and those without widen, straining the social fabric and in some cases leading to violent conflict (Thomas Homer-Dixon, 1994).

Even if disputes over the distribution of resources do not result in violence, the stresses engendered by resource pressures will affect human society in several ways. For many countries, the tempo of economic growth will decline as domestic supplies of vital materials

contract and the price of imports rises. For those states still in possession of valuable resources, the impulse to extract and sale as much as possible while prices are high could lead to sever and costly environmental damage. And the entire planet will suffer from the by-products of unrestrained resource consumption among them, increased greenhouse-gas emissions, the build-up of toxic wastes, fishers collapse, biodiversity lose and sever soil degradation.

It is apparent, then, that resource competition will play an increasingly significant role in world affairs as time proceeds. Just how substantial impact will be will depend, to a considerable, on the evolution of human consumption patterns. The greater the pressure we bring to bear on the world's existing resource base, the higher the risk of major social and environmental trauma and all these situations lead to conflict among different stakeholders(*ibid*).

2.6.2 Population Growth

Rising population is further adding to the pressure on the world's resource base. According to the world Resource Institute (WRI, 2006), total world population will reach approximately 8 billion people in 2025 or two billion more than the number in 2000. These two billion additional people will need to be fed, housed, clothed and otherwise provided with basic necessities' producing a corresponding requirement for food, water, wood metals, fibers and other materials. Although the earth can supply these materials, at least in the amounts needed for a relatively modest standard of living, it cannot continue to sustain an ever-growing human population (International Energy outlook, 1999). And satisfy the rising expectations of the world's middle and upper classes. At some point, significant shortages will occur, intensifying the competition for access to remaining supplies and producing severe hardship for those without the means to pay the higher prices thereby incurred. This situation leads to conflict among different stakeholders.

Of all basic necessities, the one that is most likely to be affected by population growth is water. Humans must have access to a certain amount of water every day, for drinking, personal hygiene, irrigation, construction and food production. Fortunately, theworld possesses sufficient renewable supplies of water to satisfy current requirements and to sustain some increase in the human population. But the pressure on many key source of supply is

growing; suggesting that severe shortages will develop in some water-scarce areas over the next few decades. This is especially true in the Middle East and North Africa, where water is already in short supply and population growth rates are among the highest in the world. For example, the number of people who will be relying on the Nile River, the Jordan river and the Tigris Euphrates system for all or most of their water supply will grow from approximately 325 million in 2000 to 740 million in 2050 without any appreciable increase in the net supply of water in the region. Unless the existing source of supply are used more efficiently, or the desalination of seawater proves more affordable, competition over access to water will become more intense in these areas and could lead to water(Peter H. Gleick, 1993). Population growth is also likely to place growing pressure on the world's supply of arable land. This is especially true in the developing areas, where many people still rely on agriculture for their basic survival or for family income. As population expands, farmers tend to crop their existing plots more intensively or to bring marginal lands in to cultivation, thereby depleting the soil of essential nutrients and risking the onset of erosion. The ever-growing demand for cropland leads to violent conflict and also leads to the accelerated clearing of virgin forests, eradicating the habitats of many unique plant and animal species & these situations leads to conflict among different stakeholders (ibid).

2.7 Resources Scarcity as a source of conflict

Scarcity: Scarcity occurs when the demand for a resource out strips the supply that resource. In supply-induced scarcity, depletion and degradation reduce the total resource supply or in other words, decrease the size of the total resource "pie". In demand-induced scarcity population growth and increases in consumption cause scarcity by boosting the demand for a resource; as a result, more people want a slice of the total resource "pie" . In structural scarcity, a severe imbalance in the distribution of wealth and power result in some groups in a society getting disproportionately large slices of the resource pie, where as others get slices that are too small to sustain their livelihoods(JHPIP, 1998).

One of the best examples of strong and direct relationship between resource scarcity and conflict has been observed in water scarcity and resultant conflict around the world. Report of

the Johns Hopkins Population Information Program (JHPIP) highlights that nearly half billion people worldwide are currently facing water shortages (JHPIP, 1998). By 2025, one in every three people will live in shortage of water. At present, thirty-one countries are facing water stress or water scarcity and by 2025 the number will explode fivefold. The World Water Forum (2000) also stresses that more than one billion people in the world have no access to water of sufficient quantity and quality to meet even a minimum level of health, income, safety and freedom from drudgery. The world's projected total of eight billion people in 2025 will enormously increase pressure on natural resources and environmental services and may cause a catastrophe. The competition between industrial, urban and agricultural use for natural resource is mounting and per capita consumption of natural resources is increasing (JHPIP 1998). Regional conflicts over natural resources are brewing and could turn violent as shortages grow. As world water scarcity bites deeper in to economic dependent on cheap water supplies, there is conflict over river catchments and lakes. Dams such as the Three Gorges Dam in China have become symbol for official tyranny, with whole cities being flooded and engineers being given free reign to resettle population who are inconveniently living in river valleys (Ohlsson, 1995). Due to the competition for available natural resources by an over-growing population, the vital ecosystems on which humans and other species depend are severely threatened (World Water Forum 2000). The earth has lost 15 percent of its top soil over the last 20 years. Water logging, salinization and alkalization affect another 1.5 billion hectares of mostly irrigated agricultural land. Desertification and drought are severely limiting the production potential of global agricultural system and posing several ecological challenges (Roling 2000). If there is scarcity of resources, there is competition, so natural resources will be continuous source of future conflict. In this context, few sentences of the speech delivered by Fidel Castro on the occasion of the 50th anniversary of the World Health Organization is worth mentioning.

.... The weather is changing; the seas and atmosphere are heating up, the air and the water are polluted, the soil is eroding, the deserts are growing, the forest is disappearing, water is getting scarce. Who will save our species?

The blind and uncontrollable laws of the market?

Neo-liberal globalization...." (ibid 1998)

2.8 Empirical Studies on Resource Based Conflict in Africa and Ethiopia

2.8.1 Cases on Africa

Among the different researches done over resource-based conflict in Africa a quick review of few works demonstrate how acute the issue of conflict is and how diverse the causes are. According to Richard Moorhead (1998), Conflicts in the Niger River delta (Mali) occur both between herders and non-herders and between groups within the herding community itself. As the delta has become drier farmers in the area have begun to cultivate deeper parts of the delta and they even cultivate the stock routes leading to the flood plains. Herders in the delta take damaging crops and other measures of conflict out of the frustration that cultivators are overtaking their grazing areas.

Mohammed Zeidan(1998) also discusses how, in the case of Mauritania, traditional pastoralists find themselves in conflict with farmers who wish to plant crops in traditional grazing areas and who prevent livestock from gaining access to water pools. Lack of intervention by the government tends to encourage farmers to lay claim to disputed land, since Koranic law recognizes the rights of those who make land productive. As a result conflicts, when they arrive are bloody and are usually partially resolved. In addition to this pastoralist groups living in the same region may have different herding strategies as well as drought coping strategies. As the result of this conflicts may occur or intensively. For instance in the occurrence of drought pastoralists may tend to gather around water points nearer to grazing land in order to avoid long journey and further marginalization in the event of another drought.

In the case of Senegal, as analyzed by AmadoyTamsiretal(1998,) alienation and conflict are directly related. Such assessments have very often meant that pastoralists have lost out to farmers in the struggle to preserve their natural rangeland from agriculture. The transfer of land ownership has in recent years favored the rich, influential city dwellers, to the detriment of transhumant herders who become dispossessed of their rights to use land. This is the principal source of conflict and impoverishment of pastoral people. Conflict is becoming more common due to the rapid degradation of farm and range areas in Sudan, according to Mohhamed Abu-sin (1998). This has forced pastoralists to extend their movement southward

where agricultural activities and settled populations are more concentrated> In addition, frustration is compounded when the government allocates land to people the pastoralists consider to be outsiders with no customary rights to the land. This has caused tribal conflicts in many instances like when the west savanna project was partly established on Ma'alya tribal land, which has been allocated to the Rezegat.

Kisemba Migerewa (1998) argues that in Uganda population pressure and the scarcity of land leading pastoralists to transform to ranching and sedenterianism is one of the major causes of conflict. In addition a refuge settlement skims of the government like in Gukenja and Isinigi countries in Mbarra district and commercial ranching as well as creation of national parks and game reserves are few of the major causes. Lane Charles (1998) summarizes the cases Kenya and Tanzania in which he argues that in Tanzania private investment as in the form of allocating rangelands to commercial agriculture is found to be the dominant cause behind conflicts. In the case of Kenya conflicts are attributed to the combination of the above-mentioned causes. A different scenario with regard to conflict in Kenya is the prevalence of conflict among tribal communities in northern Kenya and their neighboring counterparts manifested basically in the form of cattle raiding.

2.8.2 Cases of Ethiopia

When we come to the Ethiopia situation it is found out that due to recurrent drought and resource degradation as well as due to the intensifying role played by state's inefficient policy measures and administrative decisions, almost in most areas where herders and farmers are forced to compete for resources, there has been various types and levels of conflict. To begin with, John Holland (1999) is one of the writers whom we can identify with the tenure debates approach to conflict study since he basically focuses on the Borena pastoral community, he analyses how the insecure community land tenure system is increasing land alienation and threatening the Borena Survival as pastoral groups. He also adds the significance of change in the political ecology process as the predominant reality depicting the relation of of the Borena with their neighbors. According to him the Borena have lost the best of their land to the expanding agriculture. In addition, the ecological process of bush encroachment affects

approximately 40% of their former grassland. As a result, he remarks that they are forced to compete and be in conflict with their neighbors (Helland, 2001: 62). Ayalew Gebre (2001) discusses the relation of conflict the karrayu Oromo pastoralists have with their neighbors. His argument mainly falls in the category of the marginalization of herders approach since he traces the historical roots of conflict among the karrayu and their neighbors, as it had been the result of the policies of the Imperial state's commercial agriculture expansion, like that of the Nurera plantation. With regard to the relation between the karrayu and their Arsi neighbors he observed that the traditional balance of interaction between them, which used to be manifested in the form of both cooperation and conflict, is recently transformed in to relation of recurrent conflicts as a result of the increasing scarcity, which is leading them in to competition and conflict.

The adoption of multi-national federal system" seems to have contributed to the realignment of a number of conflicts which have been labeled as latent 'ethnicdispute'. Ethnicity explains neither the causes nor, in many cases, the dynamics of conflict" (SaraVaughn and KjetilTronvoll 2003) go on to write that " Nevertheless, apparently similar patterns have emerged between agriculturalists and pastoralists, as for instance between Sidama and Giji, in the South Omo between Ari and lowland pastoralists, in the east and center between Karrayu and Afar pastoralists and Oromo and Amhara(ibid). More often than not, competition for resources had manifested itself mainly in the form of pastoralist conflicts and disputes over scarce resources of land. Pastoralist conflicts have a long history and have existed in the lowland areas of the country particularly in Afar,Oromiya, SNNPR and Somalia regions. In the words of Vaughn and Tronvoll, 'many of these conflicts... have been dormant, but the new constitutional order (and urge to draw boundaries based on ethnicity) has offered new legitimacy to pre-existing competition and antagonism, whilst infusing both with an ethnic dimension" (ibid).

There have been similar conflicts in South Omo and bench –Maji zones of SNNPRS. The conflicts in these areas were caused by seasonal confrontations over grazing land and cattle raids that provoke further attacks and counter attacks. Environmental degradation and its consequential impact of recurrent droughts as well as scarcity of water and pasture are the major causes behind the conflicts in these areas. On top of these, cultural factors such as hero cult and blood

feuds contribute to escalation of conflicts. These are similar conflicts between zones and woredas of the SNNPRS such as those between Sidama and Borena, Borena and Haner(Abebe, A. 2005).

Inter-regional state conflicts have also emerged following the introduction of ethnic federalism, though Ethiopia's diverse ethnic groups were accustomed to peacefully enjoying their common natural resources in neighboring where they have lived together for many centuries. There were, however, lower level inter-ethnic conflicts over land, market, etc. These conflicts had been being resolved through traditional conflict resolution mechanisms. Illustrations are conflicts between Guji and Sidama in the borders of Oromiya and SNNP Regional States, between Oromias and Somali Regional state in the areas of Shinle Zone, between Oromos's and Gumuz in the areas of Eastern Wellega in Oromia and Kamash zone in Benishangul-Gumuz and Amhara Regional States respectively can be cited as a few instances of border conflicts (Assefa Fiseha 2007).

2.9 Traditional Conflict Resolution mechanisms in Ethiopia

In Ethiopia, where a number of ethnic groups live, there are numerous ethnically based law systems. Acknowledging this feature of social diversity prevalent in Ethiopia, Cont-Rossin described Ethiopia as "museum of people". (Donald N. Levine 2000). The contemporary regimes of various ethnic groups, consisting of unwritten norms, have been in place for long to regulate the daily lives of members these groups. Most, if not all, of these groups have their own oral customs, which vary from group to group. According to Professor Dolores Donovan and Getachew Assefa, there are more than sixty customary laws systems in Ethiopia. (Dolores A. Donovan et al2003). They point out that the life style of each ethnic group depends on the geography of the lands, which they inhabit. Accordingly, inhabitants of the high maintain plateaus of Ethiopia in the north, west, southeast, south-Central and Northeast have been settled agriculturalists engaged in the activities of farming of animal herding for ages. "Customary law", Donovan and Getachew write, still, to a large extent, governs the lives of these settled farmers, especially those living in the far corners of Oromo's, and many others such as Gurage, Sidama, kambata and Woliata, living in the Southern Nations, nationalities and Peoples Regional State(SNNPRS), one of the federating units of ethioia"9ibid). the nomadic

pastoralists, such as Afar, the Somalis, some part of Oromo, Anywaa, Nuer in the Eastern, western, Southwestern and North western peripheries of Ethiopia, are generally “only loosely linked to the Ethiopian state and their lives are governed by their traditional systems of customary law”(ibid). In contrast, the formal state legal system had a very limited reach. Donovan and Getachew emphasize “the modern state legal system governs the lives of townspeople and those of the highlander farmers who live close enough to urban centers to fall under the influence of urban mores”(ibid). Since there were hardly any formalized courts administering custom until the end of the 19th century,” each cultural community directed its affairs by a system of cohesion and equity through local notables and chiefs acting as arbiters”. (Getachew Assefa, 2001). Moreover, as the customary laws were not binding, these arbiters could disregard them. The minimal application of the FethaNegest assured customary laws’ position as the dominant legal order regulating almost every dimension of Ethiopian legal life, public and private. Given the vast rural population, which accounts for 85% of the people of the country, and the minimal in the past and the present, application of the traditional state-sanctioned rules embodied in the FethaNegest, and the mixing of Islamic law with local customary rules, it is understandable why customary laws become the dominant normative order. Ethiopian customary laws are generally unwritten, unstudied, diverse and largely unaffected by the various edicts issued by monarchs (Margery Perham, 1968). James Paul, for Dean of A.A.U Law School, characterized Ethiopian customary law as “unwritten ... personal, ad hoc, geographically particularistic, informal and undifferentiated from other norms and usages” (ibid). Despite such characterization, which is generally true except that they can be differentiated when it comes to individual ethnic group’s customs, they played an unprecedented role in the resolution of disputes by virtue of their resilience, in the face of the blanket repeal by Article 3347 of the Civil Code. Commencing on the efficacy of indigenous conflict resolution mechanisms WillamUry notes:

Emotional wounds and injured relationships are healed within the context of the emotional unity of the community. Opposed interests are resolved within the context of the community intersect in peace. Quarrels over rights are sorted out within the context over all community

norms. Power struggles are contained within the context of overall community power” (WillanUry, 1998).

A. The LubaBasa

Customary conflict resolution mechanisms have managed to survive and are today used to resolve a range of inter-communal and inter-group conflicts. The LubaBasa is one such example of a traditional conflict resolution mechanism in Ethiopia that is still practiced among the people of the Oromo to reconcile and integrate disputing ethnic groups. The LubaBasa, in the main Oromo language, Borana, means “ setting free”, and it involves the integration of traditionally despised groups into the oromo, thereby avoiding a potential conflict that might otherwise arise out of contempt for those groups. Thus, the LubaBasa can be considered a preventative mechanism that is essential to the peaceful coexistence of the Oromo with their neighboring groups.

B. The Abba Gerreb

The peoples of Wajerat and Raya-Azebo live in the Southern part of tigray. They are predominately agriculturalists. Although the formal state legal system, including the Penal code of 1957, has been extended to the Tigray Region, particularly the rural areas of wajerat and Raya-Azebo, it has always had difficulty penetrating the traditional informal criminal justice system. The *abba-gerbb* (literally, father of the river) was and still is the dominant judicial body of the rural communities of Wajera and Raya-Azebo. The *abbo-gerbb* has a key role in maintaining social cohesion among individual members of these communities. Especially the continued existence of the *abba-gerreb* would appear to account for the maintenance of local peace and order, and above all sub-regional stability amid revenge killings as well as violent inter-ethnic hostilities (Alemayehu Fentaw, 2007).

2. 10 CONCEPTUAL FRAMEWORK

2.10.1 Definition of terms and concepts

The following definitions are given for conceptual terms, which were not hitherto sufficiently defined in the context of the study and are regarded essential to clarify, accordingly:

Conflict: - is the prevalence of different violent clashes between or among different communities resulting in casualties, disruptions of production and hostilities. Conflict is a phenomenon demonstrating the dimension of relationships between the conflicting parties which creates an event of precedence(Gleditsch.etal.2002).

Natural resource degradation:- is the qualitative and quantitative decline of a certain resource, reducing its use value to different extents. It is a result of undue natural and artificial stress making which changes its texture in undesirable dimensions(ibid).

Farmers: - in the context of this study, farmers are those who are dominantly engaged in crop cultivation and have a specific area of settlement. Although crop cultivators usually supplement cultivation with livestock raising to different extents, the designation 'farmers' in this study basically refers to peasant cultivators who have specific land plots and fundamentally consider crop farming as a basis to their livelihoods(ibid).

Resource alienation: - is an externally induced act of deprivation of certain production groups of benefiting from a given resource, which they consider is theirs(Fisher, 1990)

Use value of a resource:- is a previously perceived output of a given resource, which is a function of its natural qualities. Use value is not a constant factor and depends on production style of producers and extent of use as well as relative change in its quality and quantity(Fisher, 1990).

Conflict prone:- is a geographic zone of habitation of different production groups who has actual and potential manifestations of conflict among and within the groups(Fisher, 1990).

2.10.2 Conceptual framework for the study

In this study conflict is analyzed in reference to different types of hostile clashes among farmers as result of resource scarcities, environmental degradation, population pressure and environmental governance. Accordingly this research tries to analyze the state of affairs of a conflict prone zone by assessing the situation of the interplay of these factors leading to resource scarcity and the prevalence and intensity of conflict in the study area.

Scarcity of resources in the study area may be is a function of population pressure and resource degradation. Rapid population growth leads to pressure on natural resources, and subsequent degradation and scarcity of resources. Resource scarcity gradually leads to land use change manifested in the form of expanding cultivation or grazing into areas hitherto utilized for different production purposes. Change in land use by producers aggravates resource scarcity due to increase of demands to access more of the land or water and pasture resources for a given production strategy (i.e. either cultivation or grazing). Competition is the function of scarcity manifested in the form of adversarial claims for resources. This phenomenon represents the actual measures taken and/or intensions held by procedures to acquire more land, water and pasture and to actually prevent others from using those. Alienation is a reverse scenario or response behavior of those who believe that they are prevented from benefits of the resources they consider is theirs or 'no one else's 'in particular (Common pool). Alienation is a feeling of deprivation resulting from the perception of losing resource-base for survival by external/internal actors. Competition and alienation are the functions of resource scarcity, which further are aggravated by the actions of local or national governments in the forms of artificial boundary establishment and enforcement, tenure systems and actual policy as well as administrative decisions on appropriation of resources.

Accordingly, an actual additional demand for land or land use change can be a legitimate reason to claim for more "unused" land. In this case any resistance from the higher authorities or from otheragents leads to alienation or competition (Irwin, 2000pp30). Therefore, policy actions and administrative decisions of the state are aggravating factors to induce behaviors of alienation and competition while the main cause is actual scarcity of resources. All alienation and

competition are pre-conditions for the prevalence of conflict at different levels of intensity. Conflict is the final consequence in this interplay of factors. Conflict is said to be prevalent when there are perceived, as well as, actual cases of hostile clashes over certain periods of time. Intensity of a given (prevalent) conflict is measured by the number of parties involved, the duration of time it took, the number of casualties reported, as well as, the degree of involvement required by higher authorities. This general frame of analysis will be applied on the study.

CHAPTER THREE

3.1 METHODOLOGY OF THE STUDY

3.1.1 General Description of the Study Area

3.1.2 Location and Topography

A) Bule-HoraWereda

Bule-Horawereda is one of the 264 weredas of Oromia National Regional State. The wereda is predominately occupied by the Oromo's of Guji clan with a few non-Oromo settlers in the wereda capital town Bule_Hora. The wereda is bordered on the west by Burji and Amaroweredas of Segen Area Zone of SNNPR state. On the north by Gedeo zone of SNNPR state. The residents of Burjiwereda are the Burji community and the residents of Amarowereda are Koyera community. And the residents of the Gedeo Zone are "the Gedeo people". At different occasions there are conflicts across the wereda with the communities along the common boundary. The wereda has 48 kebele administrations and according to 2007 Ethiopians housing and population census the population of the wereda is 266, 150 (CSA, 2007; Bule_Horawereda administration, 2009).

B) Burji Special Wereda

Burji is one of the five woredas of Segen Area Zone of SNNPRS. Burji is not part of any Zone previously due to different political, cultural, linguistic and geographic aspects, and due to its inter-conflicts around four special woredas surrounded, namely Konso, Derashe, Amaro and Burji, the regional government designed and set one zone for the previous special woredas and one woreda seceded from Konso and Derashe, namely Alle, become and named Segen area Peoples Zone in the SNNPR. It is named after the Burji people (indigenous community) residing in the area. BurjiWereda is bordered on the east and south by Bule-Hora and Dugida-DawaWeredas of the Oromia Regional government of Borena Zone, on the west by the KonsoWereda, and on the north by the AmaroWerda of Segen Area Peoples Zone of (SNNPR). The administrative center of Burjiwereda is soyama (Burji special wereda administration, 2009 March).

The two communities living side by side in adjacent weredas of the two regional states (Oromia and SNNPR states). Members of the two communities are engaged in different types of economic activities. The Burji community pursues farming as means of livelihood with few animal rearing as supplementary economy , while the Guji community is mainly engaged in pastoral way of life with little farming practice as supplementary economy.

Table: 1 Agro-climatic Classifications ofBurji

	Kolla	Woinadeega	Dega
Altitude	1150-1800	1800-2000	
Mean monthly Temp(Oc)	26.9-32	22-24	
Annual Ranfall(mm)	200-700	701-1000	
Dominant Crops	Maize, Teff,	Wheat, Barley, Maize, Teff, Coffee	

Source: National metrological agency, 2011/12

The worda’s temperature and rainfall is different at all climatic zones. The lowland areas of Burji where we find the three peasant associations of the bordering kebeles are considered aslow temperature zones and receive annual rainfall of 400-700mm, while in other parts of the worda the rainfalllevel is generally better. The following rainfall and temperature data for the year 2011/12 shows the situation of Burji station recorded in altitude of 1150m.

Table: 2 Mean monthly Rainfall and Temperature in Burju for the year 2011/12

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall(mm)	19.2	50.3	191	173.9	233.2	89.7	39.7	33.7	41.8	162.1	14.1	104	1151.7
Mean monthly minimum T(0c)	16.8	19.3	18.2	18.5	20.3	17.8	17.7	18.2	19.2	18.5	17.6	18.7	
Mean monthly maximum T(0c)	31.2	32.3	31.4	30.4	28.9	27.8	26.9	28	32	30.4	30.9	31.6	

Source: National Meteorology Agency, 2011/12

3.2 METHODOLOGY

3.2.1 Introduction

Research methodology is a consistent set of procedures and rules used by researchers to investigate their research environment, particular phenomena or practical problems. According to Kothari (2005), research methodology is a way to systematically solve the research problem. Therefore, this section deals with the sampling methods, data collecting tools, data collecting techniques and methods that were used to collect the desired data in order to accomplish the objectives of the study and the research approach, which was used in this study. It also discusses the types of the study design used, data sources and the types of data collected, sampling techniques that were used for site selection procedures, the target population of the study and the sample size and techniques of sampling used to determine the required sample size. In addition to this, data collection instruments that were used in this study and methods of data analysis were also discussed.

3.2.2 Research Design

In order to carry out the various research operations smoothly and in a cost effective manner, a research design is needed. So to answer the research questions, quantitative approaches with descriptive research method was selected with some qualitative data to overcome some limitations with the use of only one approach and to increase the validity of the result. Primary and secondary information were collected and used in analyzing and interpreting the data in order to produce result related to the research problem. The data collection process was accomplished with the help of questionnaires, survey and group discussions with a combination of stratified and systematic sampling techniques. From the five peasant associations of Burji and Bulehoraworeda were selected purposely and the number of households were selected by systematic stratified sampling. In addition police members and officers, development agents, local authorities, traditional leaders and elders, and other expertise were selected purposively.

3.3 Study Design

Descriptive research approach was used to assess the resource based conflict and traditional conflict resolution mechanism at local community level. The nature and causes of the conflict, the dynamics of resource governance, resource scarcity and conflict, conflict between agriculture and environment, internal and external factors that are affecting local community interaction and traditional conflict resolution mechanism in Burju and Gujiworeda was assessed between August 2012---January 2013. A semi-structured and pre-tested questionnaire was used to generate information on demographic and economic factors; nature and causes of conflict and its intensity, causalities, dynamics, and how people in localities handled and resolved conflict traditionally in the households as well as from focus group discussions.

3.3.1 Population and Sample

For purposes of this research the study, five peasant associations, among the 12 bordering associations of the woreda, were selected intentionally. Development agents, police officers, local authorities, traditional elders and leaders, all residential households engaged in the utilization and management of natural resources and involve directly or indirectly in the conflict escalation or de-escalation are included in the study.

From among the 12 kebeles of bordering woredas, the households were selected from five kebeles, namely, Billa, Haro Wonji, Woreda Dinbicho, Woreda Gude and Lemmo. The sample sizes were 212 households, 6 officials, 5 key informants and 4 focus group discussions with 32 participants.

3.3.2 Sampling method

Five kebeles or peasant associations were selected randomly. Households were selected by systematic sampling technique from sampling frame of households in each of these selected kebeles. The procedure was as follows;

- a. Population size = 40,765
- b. Household size + 4000
- c. Number of kebeles = 5
- d. Sample unit households who reside at the five peasant associations
- e. Sample size: 255

According to Kothari (1991), the minimum sample size depends on the following:

- The type of research design used;
- The desired level of confidence in the results;
- The amount of accuracy wanted; and
- The characteristics of interest of the population to be studied.

The formula suggested when population size is greater than 10,000

$z^2 p(1-p)$

$$n = \frac{\quad}{d^2}$$

Where: n = the required sample size

z = the standard normal deviate at the required confidence level

p = the proportion in the target population estimated to have characteristics being measured

d = the level of statistical significance set

Hence this study:

- The determined or selected research design descriptive research.
- Level of confidence was 95%. Thus, $Z = 1.96$.

Expected margin of error or accuracy of estimating the population parameter (d) was 5% and

the proportion in the target population was estimated as $p = 0.5$.

Then the required sample size as follows:

$z^2 p(1-p)$

$$n = \frac{\quad}{d^2}$$

$$(1.96)^2(0.5)(0.5)$$

$$n = \frac{\quad}{\quad}$$

$$(0.05)^2$$

$$n = 384$$

Considering the limited budget in terms of money and time it was proposed to cover only 212 households in this study.

Table: 3The sample size according to the strata

Kebele	No. of households	Sampling size $n_i = n \cdot (\pi_i/n)$	Selected household heads
Billa	858	212(868/4000)	46
HaroWonji	623	212(623/4000)	33
Worde dinbich	1151	212(1151/4000)	61
Worde Gude	830	212(830/4000)	44
Lemmo	528	212(528/4000)	28
Total	N= 4000		N= 212

The total households selected for the study were 46 households from Billa, 33 households from HoroWonji, 61 households from Worde Dinbicho, 44 households from Worde Gude and 22 households from Lemmo kebeles. Thus 212 households were selected by systematic random sampling, 6 officials from different government offices, 5 key informants from farmers, were selected purposively. Four focus group discussion sessions were held with 32 participants, conducted separately. The total sample size for this study was 255.

3.3.3 Data Collection

3.3.3.1 Primary sources:

The study was based on field work consisting of a field stay of few weeks as well as frequent field visits to the case area.

A. **Focus Group Discussion:** This technique is utilized as a prime technique of data collection. Accordingly, a group of candidates were selected to form focus groups. The

numbers of participants in the focus groups range from eight to ten. And the general direction pursued in those directions was for the researcher to trigger issues for discussion and promote active group participation.

B. Individual Interview: This interview was conducted with selected individuals like elders, clan chiefs', local officials, development workers, key informants and knowledgeable members of the community. The interviews consist of rather exhaustive questions and were undertaken twice or three times for some individuals.

C. Sample Survey: The sample survey was conducted to supplement the other basic field methods by generating quantitative data basically attitudinal aspects of conflict. Accordingly interviews were conducted based on a proportionate random sampling design. The surveys were undertaken in purposefully selected 5 Burji and Gujiwordafarmers' peasant associations, i.e. Billa, HoroWonji, Worde Dinbicho, Worde Dinbicho and Limmo Pas. A total of 212 questionnaires were distributed, in a proportionate manner.

D. Non-Participant Field observation: The researchers undertook systematic but non-participant observation on the case area regarding issues of relations between the different individuals or groups, the situation of the resources under question, production patterns and productivity, relationship between local people and the administration, etc.. This method was also utilized to further develop the thesis by including additional variables.

3.3.3.2 Secondary Sources

The field work was also supplemented by library work based on secondary sources. The following are secondary sources utilized during the study.

- Books, articles and periodicals,
- Studies on conflict by researchers and by administration staff as well as socio-economic studies by zonal and woreda offices,
- Statistical publications,

- Documents and reports available in woreda, zonal and other administration offices and police departments.

3.3.4 Data Collection Tools

The tools for interview was used are a structured questionnaire and was translated into Amharic. The questionnaire was pre-tested and finalized. Guideline was developed for the use of moderator/facilitator to conduct focus group discussion of four sessions during the study period with selected participants who share similar characteristics or common interests. A facilitator guided the group based on a pre-determined set of issues.

3.3.5 Data Quality Control Mechanism

The field questionnaires were checked during and after collection for completeness and consistence by the researcher. Incomplete data was made complete after checking the households later. Efforts were made to have the complete coverage in sample respondents as well as in content of questionnaires.

3.3.6 Data Analyses(treatment of the Data)

The collected data from sample units was edited, and analyzed by tabular analysis using descriptive statistics, which is mainly describing the nature of the present and past resource based conflict situations in Burji and Guji. The qualitative data was reported in words, the forms of descriptions. A statistical data base was built by using the Microsoft excel and other computer programs after introducing and editing the information collected through the qualification, cleaning and verification of the questionnaires.

CHAPTER FOUR: FINDINGS AND DISCUSSIONS

4.1. Results

4.1.1 Response Rate

All the 212 households, 6 officials and 5 key informants were responding, while out of planned 32 participants for the focus group discussion, 24 had participated. These indicated that 96.8% of the questionnaires were responded (Table 4).

Table: 4 Response Rates of Respondents

No.	Respondents	Planned	Achieved	%
Households	212	212	212	100
Focus group	32	32	24	75
Officials	6	6	6	100
Key informants	5	5	5	100
Total	255	255	247	96.8

Source: Questionnaire survey, November, 2012

4.1.2 Demographic Data

The survey analyses clearly depicts that the average household size of the sample population was 6 members per household. The percentage distribution of the current household size indicates that the majority, 68% of sample households, had encompassed 4-8 members per household, 9% of households had 1-3 members per household and 23% had encompassed 9-13 members per household (Table 7). By comparison, the average household size of the sample population was 3 members per household 10 years ago (CSA, 1994-2007)

The majority of the respondents were male, comprising 93% (Table 8). Almost all (99%) were married and a higher percentage (71%) of the respondents' religion was protestant, Orthodox Christian 24%, Islam 1% and others 4% (Table 5).

Among the household heads, 45% had primary level education, whereas 28% were illiterate, 26% had secondary level of education and 1% had tertiary level of education (Table 5).

Table: 5 Demographic characteristics of the survey households in Burji and Guji/Bulehoraworeda

No.	Characteristics	No. of households	Percentage
1	Sex of households		
	Male	197	93
	Female	15	7
	Total	212	100
2	Religious affiliation		
	Protestant	151	71
	Orthodox Christian	52	24
	Muslim	1	1
	Others	8	4
	Total	212	100
3	Marriage status		
	Married	210	99
	Unmarried	2	1
	Total	212	100
4	Educational Status		
	Illiterate	58	28
	Primary level	96	45
	Secondary level	57	26
	Above secondary level	1	1

	Total	212	100
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Source: Questionnaire survey, November, 2012

Based on the field survey, 28% of households had owned less than 0.5 hectare of land, 17% had owned 0.5-1% hectare of land, 26% had 1.5-2.5, 13% had 2.5-5, 12% owned 1-1.5 and 4% had owned 5-10 hectares of land. Thus, the majority of surveyed households had owned less than one-hectare of land in the study area which manifests the scarcity of farm land.

4.2 Conflicts

4.2.1 The Analysis of Nature and Causes of Conflict and Its Consequences in the Study Area

4.2.2 Forms and manifestation of the conflict

Often conflicts are associated with small-scale violent conflict among individuals, groups and within family members, which result in human causality and destruction of property such as crops. However, while it is true that these are the major manifestations of conflict among farmers, as far as the case area is concerned, there are few more manifestations of conflict in addition to what has been stated. The situation regarding the forms of conflict as gathered in the area from observations, focus group discussions as well as interviews are presented below.

Violent conflict Involving Human and Property causalities

Mostly, violent conflict takes place when groups and individuals intentionally attack another group or individuals. Triggering events or proximate causes of such attacks come from a group or individual farmer from the same community. Illegal holding of farm land without the knowledge and recognition of the local community, absence of land use plan, presence of landless youths, fear of investment, land and water related corruption of local government officials, presence of idle state farm land, unfair distribution and utilization of pasture/grazing land, irrigation water, conversion of community communal forest into cultivation, unknown and illegal settlement, individual and kebele border dispute by farmer groups or individuals could attribute to triggering conflicts. Such conditions are often sufficient enough to provoke violent attack. As a result all forms of communications for mutual understanding and

tolerance are broken down between the conflicting parties. Similar effects are also created by incidences of an unusually heavy activity of fire wood collection, unfair irrigation water use and management during dry season by farmers. Often, such events result in violence conflict, especially, if the activities coincide with confrontations occurs over accidental or deliberate setting of bush-fire and other acts burning of range land and damaging crops. Burning and damaging crops is one manifestation of conflict.

Damaging water well used by group of farmers for irrigation in the study area is a recent occurrence, which is seen as a manifestation of violence among competing groups. Such incidence has contributed to alienation of some farmers that provoked violent conflict.

4.2.3 Measuring The Conflict

Conflict as a variable is usually analyzed in terms of its prevalence as observed phenomena and the dimensions by which it is measured, mainly by its degree of recurrence and intensity in a given area. In terms of recurrence the prevalence of conflict in this study is measured in relation to the comparison of the total number of reported cases of conflict over time and more specifically over 8 consecutive years. Accordingly, an increase or decrease in the total number of reported cases of recent years as compared to the previous ones is taken as indicator of conflict in the study area.

Intensity of conflict on the other hand is measured by taking as an indicator of the total number of causalities in the selected year in comparison to the causalities of a recent year.

Conflict in the case area was strongly felt and a prevalent phenomenon. All the conflicting individuals and groups of the same local administrations, regional government and the general public who have access to the information about the situation in the area had different level of awareness about the prevalence of conflict, its causes and nature. In a survey conducted for this study a data collected on sample populations had revealed that the majority of the respondents from the local communities had responded that they receive information about the conflict in the area frequently and at an increasing rate. In discussions with the local officials, police members, traditional leaders and elders, and

development workers, it was revealed that all perceive conflict in the case area as one of the major obstacles for development. Local government bodies are recently showing interest in assessing the problem and evaluating options for conflict management and resolution. “According to police report, during the last eight consecutive years, there were 158 deaths in both woredas, crops and fruits grown on 44.5 hectares of land were destroyed and a total of 2985 conflicts had occurred in the two woredas. Amongst these incidences, 48% or 76 persons were killed, 44.5 hectares of different crops were destroyed, and 29% or 866 clashes occurred in the specific study areas of five kebeles”.

The following table summarized data from the police report on occurrences of conflict and the number of human and property casualties in small-scale violent conflicts over a series of time (from 1995-2002 E.C. or 2001/02-2009/10 G.C.).

Table: 6 Data on number of conflict occurrences and number of casualties in these conflicts each year (1995 E.C -2002 or 2002/3-2009/10)

Year of conflict occurrence	Conflict involving violent killings	Conflict involving property destruction	Total number of conflict occurrences	Total number of human casualties or death	Total area of property destroyed
2002/3(1995 E.C)	193	35	228	42	1 hectares of crops
2003/4(1996 E.C)	200	25	225	27	2.5 hectares of crops
2004/5(1997E.C)	270	49	319	16	2 hectares of crops
2005/6(1998E.C)	243	45	288	14	3.5 hectares of crops
2006/7(1999E.C)	258	67	325	10	4.5 hectares of

					crops
2007/8(2000E.C)	499	146	645	17	7.5 hectares of crops
2008/9(2001 E.C)	328	143	471	16	11 hectares of crops
2009/10(2002 E.C)	412	72	484	16	9.5 hectares of crops
Total	2403	582	2985	158	41.5 hectares of crops

Source: BurjiWoreda Police Station, 2012

1. The Nature and degree of Recurrence of the Conflict

One of the indicators of the nature of conflict in the area is the nature and degree of its recurrence. Accordingly, the study has revealed that:

- a. Conflict among farmers has been frequently occurring in all the case years, i.e., 8 years, or for a duration of time amounting to a decade. This depicts the area is a zone of recurrent conflict among farmers (Focus Group Discussion).
- b. Occurrence of conflicts vary in a pattern, periods of sharp increase and steady fall, exhibiting a total nature of high recurrence over time with periods of natural gap in between the periods of high recurrence. This data show that the inherent causes of conflict are dictating the pattern of relations among the individuals and groups. The relative gaps in between the high recurrence periods are the results of temporary withdrawal of the groups or individuals and the involvement of local government to manage the conflicts. However, since the underlying causes are still there and conflict management will not have the final impact of resolving the conflict, conflicts persist in similar patterns (BurjiWoreda police Report,2012)

4.2.3.1 Causes of conflict in the Study Area

Causes for conflict can be classified as inherent and proximate causes based on the degree of their contribution to the prevalence, recurrence as well as the intensity of conflict as phenomena. Inherent causes are causes which create the material conditions for conflict in a dynamic process. Proximate causes are the psychological conditions resulting in behavioral changes for conflict (Focus Group Discussion).

The relationship between the two is explainable by the fact that prevalence of inherent causes by itself does not lead to conflict. While the proximate causes cannot exist without inherent causes. For example, in this study the inherent cause of farmers' conflict was identified as natural resource scarcity. For scarcity to lead into conflict:

- It has to be sufficient enough to threaten livelihoods of communities;
- It has to be perceived and deeply felt as a phenomenon; and
- It has to impact the psychology of conflicting parties.

In the preceding section we have seen that conflict among farmers is generally increasing in terms of intensity and is strongly prevalent as well as being a recurrent phenomenon. In this section the analytical explanation will be given as to why in the first place there is conflict and what makes it recurrent and intense. Based upon discussions of the Focus Group and key informants the followings were the main causes of conflict:

- The expansion of illegal land holding;
- Conversion of forest and grazing lands into cultivation;
- Unfair land distribution and irrigation water;
- Unemployment and landlessness;
- Expansion of investment and urbanization;
- Displacement of boundary marks of land between families and absence of boundary marks between peasant associations/kebeles;
- Lack of good governance or land corruption by local government bodies and other local elites;
- Population pressure and land degradation;

- Illiteracy, poverty, and sale of farmland in the name of lease;
- Mal-administration and use of common land and irrigation water; and
- Exclusion of the poor from their bases.

4.3 Analysis of Natural Resource Scarcity

4.3.1 Natural Resource Scarcity in the study area

1. Shortage of Farm and Grazing land

Shortage of land for cultivation and grazing is the result of the decline in land holding size by farmer households. Farmers land holding size used to be relatively bad before the radical change brought about due to land reform and resettlement policy measures taken by the current and past regimes. The crucial periods associated with these changes are the years 1984/5 and 1987/8. The Dergue policy of land reform in 1975 had great significant impact on land holding size of the area. Since there was large-scale tenancy in the area peasant households who became land owners under the Imperial Regime's law of land use had maintained their holdings after nationalization. In the years 1984/5 the Dergue realized a policy of resettlement, which mainly affecting grazing areas. In the year 1996/7 the Ethiopian People's Republic Democratic Front government launched a policy of land redistribution under the name "the just distribution of land". Under this policy, among the total of 36,840 households of Burji only 10,063 were certified households, among these, 54% of the households own below 0.5 hectare per household. However, 26% of households had owned more than 0.5 hectare and less than 1 hectare per household, while the remaining were satisfied with their land holdings, according to the field survey (Table 7). The situation for grazing land is even worse than farm land. Decline of grazing land was attributed to the allocation of former grazing areas to cultivation during the implementation of the land redistribution for landless youths. Illegal land holding by some individuals and groups, conversion of forest, bush and grazing land into cultivation land and as a result of measures taken by farmers to expand their holdings to adjacent grazing areas. Due to this condition and increase in animal and human population there was scarcity of animal feed sources and

intensified degradation of land at an alarming rate. During the previous government farmer grazing areas were protected by an arrangement of communal use and regulated by peasant cooperatives. However, nowadays youth cooperative officials started to expand their holding over the grazing areas. The current government measures of land administration/management system did not reverse the situation but rather aggravated it by bad natural resource governance. Shortage of grazing resources is a major problem of scarcity, as manifested by decline in availability of grazing resources in the case area.

In addition to above information gathered from local elders, according to CSA (2001/02), socio-economic characteristics of the population in agricultural households and land use in Burjiworedahad indicated that 13.7% of households own under 0.10 hectare of farm land per-household, 48% of households own 0.1-0.5 hectare of farm land per-household, 20.4 % of households own 0.51-1.00hectare of farm land per-household, 2.5 % of households own more than 2.01-5.00 hectare land per-household. This information shows that the majority of households or 13.7% of households in the study woreda owned very small parcel of farm land per-household and clearly shows the scarcity of farmland.

Table7. Land holding size of certified households in Burjiworeda

No.	Characteristics/landholding	Number of households	Percentage
1	Less than 0.5 hectare	5420	54
2	0.5-1 hectare	2625	26
3	1-2 hectares	1386	13
4	2-3 hectares	622	6
5	Above 3 hectares	11	1
	Total	10,063	100

Source: Burjiworeda Agriculture office, 2013

4.3.2 Causes of Scarcity/shortage of natural resources

Natural resource scarcities are caused and intensified by the increase of human population and rapid natural resource and ecological degradation. Often conflicts are associated with the decline of the natural resources and the increased population competing over the “resource pie”.

a. Rapid Population Growth

Total size of population was tremendously increasing in the area. For instance, information obtained from Burjiworeda administration indicates that the rate of population growth for that area was 3.5%, which is larger than the estimated national average for rural areas, which is 2.6 % (CSA, 2007). The increase was mainly attributed to religious and cultural custom of polygamy and the absence, rather resistance against family planning practices. The Burji people, as a community, strongly believe that having as many children as possible is advantageous in terms of strengthening their family and community. The responsibility of raising and taking care of children was shared by both parents in the family.

b. Natural Resource and Ecological Degradation

Gradual deforestation of trees and bush coverage in the area was common. Rises in temperature and soil erosion, as well as decline of biomass for animals consumption was a phenomenon increasingly observed, resulting in a gradual decline of soil fertility. Associated with these phenomena, the demands for more fuel and construction wood and moving livestock to other area for grazing became a source of conflict.

In relation to the grazing land available in the area the livestock population was considered to be very high. The number of livestock holdings by farmers in Burjiworeda is given on Table 8.

Table: 8 Estimated number of livestock holdings in BurjiWoreda in the year 2011/12

No.	Kinds of livestock	Estimated No. of animal holding	Percentage
1	Oxen	16,373	20
2	Cows	28,364	34
3	Sheep and Goat	34,529	42
4	Equines	3,084	4
	Total	82,353	100

Source: BurjiWoreda agriculture office, 2012

Holdings of the sample households used in this study cover only 2.3% of the livestock in the study woreda (Table 9).

Table: 9 Number of livestock owned by sample of households

No.	Type of livestock	Number of animal holding	Percentage
1	Oxen	702	38
2	Cows	954	51
3	Sheep and goat	202	10
4	Equines	12	4
	Total	1,870	100

Source: own field survey November, 2012

4.3.3 Change in Land Usage

Changes in land use have been the apparent consequence of the above mentioned forms of natural resource depletion. One of the manifestations of land use change is the conversion of grazing land to crop land. Farmers are increasingly forced to expand their farms to the grazing areas. As a result most of the grazing lands were lost to cultivation. In some farming villages, 75% up to 95% of their grazing land was lost in the process, according to key informants. Cultivation also has expanded to rocky lands and hills especially to upper streams in the study area. As a result, farmers were increasingly forced to rely for grazing in the nearby areas. Adoption of new crop and fruit was one other manifestation of the need for and a measure of land use change. The traditional crop varieties in the area were giving way to the new variety due to the suitability of the soil and temperature as a result of changes associated to ecological and resource degradation. In the case area, they were increasingly under pressure to look for grazing and water sources by expanding their holdings into border areas near the farming villages. During shortage of rain rangeland degradation became even more acute. Local communities were also being constrained by the increase in human population, intense competition for resources with other users, recurrence of flooding and drought around the low land area and allocation of land for investment in commercial agriculture. Respondents perception on problems of scarcity of natural resources is given on table 10.

Table:10 Farmers Responses on the prevalence of resource scarcity

No.	Responses	No. of respondents	Percentage
1	There is scarcity	173	88
2	There is no scarcity	23	12
	Total	212	100

Source: Own field survey November, 2012

The sample survey also revealed that a considerable proportion of the respondents (53%), attribute the problem of scarcity to a combination of resource degradation and population pressure, 26% attribute it to population and livestock pressure and 21% attribute the problem to land degradation and soil erosion (Table 11).

Table: 11 Survey result on community perception about causes of resource scarcity

No.	Responses	No. of respondents	Percentage
1	Population pressure	55	26
2	Land degradation	44	21
3	Both population and land degradation	113	53
	Total	212	100

Source: Own field survey, 2012

4.3.4 Analysis of Resource Governance and Conflict in Burjiworeda

Land and water are the most important natural resources in the case area. A total of six rivers and 102,879 hectares of cultivated and cultivable land are available in the study area (Table 2). Even under condition of vast amount of water availability, irrigation water is scarce in the area. Investment in commercial farming had created competition for land and water and had become a source of conflict by different users. Cultivation of mountains and hills was common and difficult because of steep slopes and fragile geography, which causes recurring landslides and soil erosion. The growing population requires more food, which requires more water for irrigation and more land to farm according to focus group discussion.

Ecological characteristics and climatic factors affect such consumptive use of irrigation water and land, but it varies spatially and seasonally, especially irrigation water which leads to an

unequal distribution. In the study area, resource governance is therefore characterized by an unjust and insufficient use of irrigation water and land, which resulted in contradiction and conflicts. Land and water scarcity, competition and conflict are common characteristics framed under social, economic, political and legal issues in the study areas according to focus group discussion.

The land use systems in the study area are rapidly changing because of increased environmental consumerism. As a consequence, over exploitation of natural resources and environmental services was becoming harsh reality. The lack of strong environmental governance and weak institutional arrangement were exerting enormous pressures on natural local resources in recent years.

Unfair land distribution and disparities in land possession are the major cause of poverty, injustice and social discrimination. Due to such disparities a large number of people have no access to productive land resource, more than 54% of farmers had less than one hectare of land and 76% of households were not satisfied on size of land holding. Substantial local variations in the distribution of agricultural lands exist in Burjiworeda.

Many large and small natural resource governance projects implemented by different agencies are introducing new conflicts as well as having various negative impacts on local community. For example, ignorance of the importance of indigenous knowledge in planning and designing new systems, extortion, alteration of local rights and regulations, replacement of old institutions by new ones, imposition of technocratic solutions, are some of the immediate implications of new interventions. These interventions have their own firmly fixed and uniform policy and rigid procedure. They are technocratic in nature and generally do not acknowledge local diversities. This is becoming one of the major causes of conflict in Burjiworeda according to focus group discussion.

Conflict arises if the new policy of the government contradicts the local culture practices. The economic motive of people to acquire more from existing natural resource on a competitive basis also leads to conflict. Conflict is also growing due to the contradiction between environmental and economic interest. Changes in historical use patterns in natural resources

can bring conflict into a community. Similarly, contradictions of legal arrangement and customary practices have promoted several conflicts.

The other important point in the analysis of natural resource governance and conflict is the social dimension of resource governance, which is also crucial in natural resource based conflicts. Social dimension refers to the more human related aspects of negotiations, such as knowledge, technology and institutions. In the study of resource conflict it is important to understand the role of human dimension in natural resources. In the contemporary development discourses natural resources are usually perceived as hard, objectively fixed bio physical facts, such as soil, crop, livestock, disease and pests, water yields, erosion, carrying capacity, bio-diversity, physical properties, etc. And factors such as human goals, organizational and technological aspects are usually ignored. But conflict concerning natural resources is outcomes of societal arrangement human intention and behavior, framed within those bio-physical properties. Therefore, both these dimensions of natural resources are essential for a better understanding of conflicts in natural resource governance. Resource management decisions and activities of resource users performance of bureaucracy , functioning of user groups and associations, access to and control over resources, customary practices and state laws/regulations, livelihood requirements and welfare of people are therefore important issues to be addressed in relation to resource conflict.

4.3.5 Analysis of Agricultural Impact on Environment and linkage of Conflict

Agriculture can either sustain or degrade the environment. According to focus group discussion and survey questionnaire responses that have been explored, agricultural engagement had negative effects on land and water, even though its importance of in providing products for human sustenance. Negative impact includes:

- Conversion of forests, grasslands, bush and other habitats for agricultural use;
- Degradation of soil quality;
- Pollution of soil and surface water, through excessive or inappropriate use of pesticide, herbicide and artificial fertilizer;

- Significant loss of crop and livestock genetic diversity through the spread of industrial monocultures, reducing resilience in the face of climate and other changes.

Negative impacts are particularly closely associated with intensive agriculture, which affects the environment through high-energy consumption and the polluting effects of inputs such as pesticides, herbicides and fertilizers. However, agriculturalists are also the custodians of thousands of crop and livestock varieties. Agricultural systems, both modern and traditional, that rely on ecosystem management rather than the external inputs of intensive farming can sustain the environment.

As a result, they can be a way of conserving valuable crop and livestock diversity as well as effectively suppressing pests and boosting nutritional values. Food and agriculture systems can be designed to enhance both the provision of ecosystem services and human well-being.

Sustainable agriculture can be achieved by maintaining healthy soils, reducing water pollution, increasing the number and variety of wild species on farm(e.g. soil organism, pollinators and pest-control agents) ;maintaining crop and livestock diversity; and being energy efficient, herby cutting emissions of carbon dioxide to reduce global warming.

Poor farmer can more than double their yields and raise their incomes by adopting resource conserving practices.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Conflict over land and natural resources are obstructing the efforts of the international and national community to achieve the Millennium Development Goals and other key development priorities in the areas of the environment, peace, and security and democratic development.

In this study it has been observed that the production systems of farming and livestock raising share a common ecological zone of production. Conflict among farmers has been a dominant feature of interaction. The study in Burji-Guji has explored the relationship between resource scarcity, population pressure and conflict and concluded that the major cause attributed to the prevalence of frequent conflict is the situation of the ever-increasing trend of natural resource scarcity and population pressure. Accordingly, population pressure and resource scarcity are analyzed in their multi-dimensional manifestations. The study has revealed that the inherent and most dominant cause for conflict among farmers, especially in five study areas, is natural resource scarcity and population pressure. In addition, other factors like uncertainty and lack of clarity in the tenure and individual and Kebele claims of boundaries contribute for the aggravation of conflicts. Therefore, prevalence of conflict in many areas of the locality requires urgent attention and rapid response since it is increasingly affecting peaceful cohabitations and productivity while consequently threatening the livelihoods and human rights of the local communities.

5.2 Policy Recommendations

5.2.1 Strategies for Intervention

As findings of this study as well as other studies on similar issues suggests the critical areas of intervention to bring about sustainable solution to the issue of conflict is to deal with the inherent cause of conflict, which is natural resource scarcity.

- Accordingly the major strategy that should be designed and implemented is development intervention along several dimensions: in short, medium and long terms. Development intervention aimed at bringing about changes including changes in the pattern of relation can achieve their goals if they are carefully designed and implemented to match the specific requirements of the target groups.
- In addition to this, it is very essential to focus on alleviating the problems of population pressure and resource degradation by implementing development projects that combine these two elements in parallel. Range and farm land rehabilitation projects, afforestation projects, irrigation water development projects and family planning schemes are some of the options of development intervention in the area and other areas with similar needs.
- The other major area of intervention of secondary importance is dealing with the behavioral aspects of the population. This intervention will have a minimal impact in the absence of development intervention. However, in due course of time when positive results of the development intervention are apparent it will become important to deal with attitudinal aspects of the population concerned. Hence, institutional intervention to change the pattern of relations from competition to cooperation will be essential. In line with this, awareness creation schemes and fora of cooperation and communication should be launched so that the community will be able to interact frequently among each other and thereby create a mechanism of trust, friendliness which will help to mitigate the elements of animosity.

5.2.2. Measures of Policy Reforms

The major area of policy reform is to deal with current legal and administrative elements that are found to aggravate than mitigate the problem of conflict in the area.

- One of these is lack of clarity and transparency of the tenure system and the issue of individual and kebele boundaries demarcation. One essential reform in this regard should be a legal reform for recognition of community property, which among other things will enable all communities to be aware of their possessions rights and be able to protect illegal land holders and in the area and farmer grazing areas and forests from being unlawfully possessed and utilized in an unsustainable manner. Once the communities established possession rights they can determine their forms of use and modes of access to others by adjusting to their needs in situations of relative abundance and scarcity without feeling alienated at scale. The other essential reform to be recommended is regarding determining local boundaries in resources scarce areas where two different user groups interact.
- Specific application of this should be subject to detailed study, but should be implemented asymmetrically to fit the practical requirements of different areas and require active community participation as well as through negotiations. Implementation of this strategy is crucial for avoiding competition and promoting co-production leading to cooperation. In addition the local boundary areas, if established, should be an area of focus for development interventions where local authorities will endow their common resources and efforts.

5.2.3 Efficient Structure of Conflict Resolution

- Establishment of the peace committees at different level of the federal, regional and local government structure is one positive achievement that deserves proper recognition. However, the peace committees should effectively work to actively involve community members including essential groups like elders, clan chiefs, women and youth. In addition, they need to be further strengthened and supported by regional and local government authorities to effectively accomplish their tasks. One important measure that needs to be taken in this regard is an active follow up of their activities by higher authorities. The House of Federation and Regional Security and

Administration Bureau should boost the level of engagement in the area, research and coordination of the activities of the peace committees with other governmental and non-governmental institutions.

- There should be an increased collaboration and networking between the statutory and customary institutions of the governance. In particular, the state should recognize and support the customary courts and enforce their rulings. The customary laws are often more important than statutory laws and are relied up on in deciding access rights to natural resources and in resolving conflicts. Neglect of these norms and laws may have negative consequences for development policy of the nation in general and for the local community who rely on them in particular.
- In general, the whole effort of the government should be directed at natural resources development, leaving the management and operational aspects to the traditional institution. Yet, the local community should be given a say in the development projects starting right from the planning stage. Furthermore, the role of local customary institution in natural resources and common land management and conflict management should be spelled out clearly in the natural resources policy and common land use plan of the country. Finally, the task of conflict resolution and peace building requires concerted national and local efforts, which need to be guided by appropriate policy framework.

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Annex 1: Survey Questions for households

An academic research on “Assessing of natural resource based conflicts: a case of Burji and Guji communities at SNNPR, Ethiopia

Introduction: - The researcher is one of the master students at Indra Gandhi National Open University (IGNOU) at St. Mary’s University, department postgraduate programme of Master of Art degree in Rural Development. As a partial requirement for the completion of the programme he is undertaking a research on the above topic. The purpose of this questionnaire is to capture first hand information on the issue under consideration. All questions posed are related to this study. Your individual response will be kept strictly confidential.

Thank you in advance for your collaboration.

A. Interviewee/Identification

1. Date____/____/____
2. Name of the interviewee_____
3. Age of the interviewee_____
4. Sex of interviewee_____
5. House No._____
6. Kebele_____
7. Interviewer name_____ Sign_____
8. Supervisor name_____ Sign_____

B. Actual/Basic information

9. Marital status: Married---- Unmarried----
10. Sex of household head Male ---- Female---
11. Family Size now _____
12. Family size before 10 years_____
13. Religion_____
14. Educational status: 1) Illiterate 2) Elementary 3) Secondary 4) Above secondary level
15. How many hectares of land do you have? _____

16. Income level per year (estimation) _____

17. Do you have other sources of income outside farming? Yes---- No----

18. If "Yes" fill the following table

No. off-farm activities 1) Trade 2) Weaving 3) Pottery 4) Wood/Metal Works 5) Other activities

19. Was the land possession sufficient for you and your family? Yes--- No---

20. If your answer to question 19 is "yes" why not?

21. How many livestock do you own? List by type. _____

22. Where was your livestock grazing pasture? 1) Privateland 2) Communal land 3) state land.

23. In your district is there sufficient grazing land? Yes---- No----

24. If your answerer to question No. 23 is "No" why not? please describe:

25. Do you have land certificate? Yes ----- No-----

26. If your answer to question No. 25 is "No" why not?

27. Are you benefiting from common natural resources, like water, pasture and forest? Yes--
-- No-----

28. If your answer to question No.27 is "yes" describe the management problems for these resources: _____

29. What is your suggestion to improve problems related to utilization of natural resources?

30. What were the negative impacts of agriculture on environment?

31. What are the causes of resource scarcity in your woreda? 1) Land degradation 2) Population pressure 3) both 4) If there are any other causes please describe _____

32. If your answer to Q.31 is one or more of the above listed alternatives please explain how it causes conflict _____

33. What are the root causes of conflict in the area (in the district)?

34. What were the main conflicts in the area and how about its nature?

35. Who were the actors in the conflict & their interest?

36. Please describe the existing environmental governance/management problems that cause conflict in your district?

37. Do you think that there was an exclusion or alienation of some groups or individuals from the use & management of land, water and pasture in the society? Yes----- No-----

38. If your answer to Q.37 is "Yes" what was the reason(s) for exclusion/alienation? 1) Political difference 2) Cultural/social rank difference 3) Religious difference 4) Ethnic/clan difference 5) Wealth difference

39. Was there fair utilization of natural resources in communal border areas? Yes--- No----

40. If your answer to Q.39 is "No", please describe why?

41. Was there scarcity of farm and grazing land in your district? Yes----- No-----

42. If your answer to Q.41 is "Yes" please describe why?

43. Please describe the level of economic interaction of the local people with local, national and international market. And it's positive and negative impact in life of local community;

Annex 2: Guide questions for group discussion with traditional leaders and elders.

1. Was there any traditional conflict resolution mechanisms in Burji/Guji communities? Yes--

--- No-----

2. If your answer to Q.1 is "Yes" what were those mechanisms?

3. What were traditional institutions in the study area?

4. What were the differences between/among traditional institutions, with relation to conflict resolution?

5. At which place was the traditional conflict resolution carried out?

6. What was the relation between/among traditional institutions in relation to conflict resolution?

7. Explain the traditional conflict resolution method in a case of violent conflict; for example killing_____

8. Who execute the decision(s) passed by traditional institution(s)?

9. What will happen if a person refuses the decision of traditional institution(s)?

10. Currently, does traditional institution work? Explain

11. What resource scarcities was observed in your area? 1) Land degradation 2) Population pressure 3) both 4) If any other factor, please describe_____

12. If your answer to Q.11 is one or more than the above listed alternatives please describe how it causes conflict.

13. What are the roots causes of conflict in the area (in the district)?

14. What were the main conflicts in the area and describe its nature?

15. Who were the actors in the conflict and their interest?

16. Please describe the existing environmental governance/management problems that cause conflict in your district?

17. Do you think that there was an exclusion or alienation of some groups or individuals from the uses and management of natural resource in the society? Yes----- No-----

18. If your answer to Q.17 is "Yes" what is reason of exclusion/alienation? 1) Political difference 2) Cultural/Social difference 3) Religious difference 4) Ethnic/Clan Difference 5) Wealth difference

19. Was there a fair distribution and utilization of natural resources in the bordering communities? Yes ----- No-----

20. If your answer to Q.19 is "No", please describe why?

21. Was there scarcity of natural resources in bordering communities? Yes---- NO---

22. If your answer to Q.21 is "Yes", why ?

Annex 3:A guide for focus group discussion with police officer, members of security affairs of the study woreda

1. Annual number of conflict occurrence and number of casualties in these conflicts each year (1995E.C- 2003E.C)

Year of conflict occurrence	Conflict involving violent killing and injury	Conflict involving property destroyed	Total No. of human casualties	Total No. of properties lost/destroyed
2002/2003(1985 E.C)				
2003/2004(1986 E.C)				
2004/2005(1987 E.C)				
2005/2006(1988 E.C)				
2006/2007(1989 E.C)				
2007/2008(1990 E.C)				
2008/2009(1991 E.C)				
2009/2010(1991 E.C)				
2010/2011(1992 E.C)				

2. What are the root causes of conflict in the study area (in the district)?

3. What are the main conflicts in the area and its nature?

4. Who were the actors to the conflict & their interest?

5. What are the causes of resource scarcity in your woreda? 1) Land degradation 2) Population pressure 3) Both 4) any other _____

6. If your answer to Q.5 is one of the above listed alternatives please explain how it causes conflict:

7. What are the causes of the conflict in the area (In the district)?

8. What were the main conflicts in the area and its nature?

9. Do you think that there was an exclusion or alienation of some groups or individuals from the use & management of natural resource in the society/ Yes---- No-----?

10. If your answer to Q.9 is "Yes" what is reason of exclusion/alienation? 1) Political difference 2) Cultural/social difference 3) Religious difference 4) Ethnic/clan difference 5) Wealth difference

Annex 4: A guide questions for group discussion with agricultural experts

1. List the Perennial Rivers and their use in Burji/Guji area;

2. Explain the agricultural land use system and land coverage in the Burji/BuleHoraWoreda;

3. What were the negative impacts of agriculture in the environment?

4. What causes scarcity of natural resources in the study area? 1) Population pressure 2) Land degradation 3) Both 4) any other

5. If your answer to Q.4 is one of the above listed alternatives please explain how it causes conflict?

6. What are the main or root causes of conflict in the study area (in the district)?

7. What are the main conflicts in the area?

8. Who were the actors in the conflict& their interest?

9. Please describe the existing environmental governance/management problems that cause conflict in the study area;

10. Do you think that there was an exclusion/alienation of some group in natural resource management in the society? Yes ----- No-----

11. If your answer to Q.10 is "Yes" what is reason(s) for exclusion/alienation?

12. Was there a fair distribution of natural resources in bordering communities? Yes---- No-----

13. If your answer to Q.12 is "No", please describe why?

14. Was there scarcity of farming, grazing land, forest land in your district? Yes----- No-----

-

15. If your answer to Q.14 is "Yes", why?

16. Describe the Agro-climatic classification of Burji/Bule Hora;

17. Monthly rainfall and temperature in the study area;

18. Please describe the level of economic interaction of the local, national and international market, and its positive and negative impact in the life of local community;

19. How many farmers were registered and own land certificate in the woreda?
