

Institutional Settings and Integration of different actors in Watershed Management. A case of the Wondo Genet Watershed in the Rift Valley Lakes Basin in Ethiopia.

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Abstract

The essence of watershed management with the involvement of different actors built its base in Ethiopia as the only option to conserve and protect watershed resources and enhance land productivity for betterment of life. However, the integration of different actors and institutional arrangement for sustained watershed management still remains weak; results in elevated competing claims over scarce resources, mismanagement and poor cooperation between actors. This study was designed to assess and recommend on integration of different actors and institutional settings in watershed management of the Wondo Genet watershed in the south central of Rift Valley Lakes Basin. The research methodology involved review of relevant literatures and field assessments based on key focus points. The result revealed that there is weak integration between different actors dependent on watershed resources within and among different watershed strata. Overlapping responsibilities between public organizations, missing of watershed management component in key watershed actors and poor capacity of institutions in charge to enforce noncompliance are some. According to the participating respondents, this contributed to increased illegal settlement on sensitive sloppy remnant natural forest, degrading traditionally built upstream-downstream inter-linkages and interdependences in irrigation water sharing, competing claims and conflicts over resources use.

Key words: actor, scarce resources, Wondo Genet watershed, strata, remnant natural forest

1. Introduction

1.1 Back ground information

Integration of different actors/stakeholders is an integral part in watershed management. Overall people who have a stake or share in particular issue or system have a great influences (Hannan and Freeman, 1984). Hence, sustainable land resources use and management can only be achieved through land, water and vegetation management based on integrated approach with direct involvement and participation of different actors (FAO, 2005). This necessitates the presence of institution. Institution is laws, regulations, organizations, standards, procedures or other establishments based on a set of working rules originating from an established custom, law or relationship in a society or community (Jaspers, 2010).

According to the World Commission on Environment and Development (1987), the entire world is threatening by serious environmental problems as rapid destruction of water, air and land and the over-exploitation of natural resources and become the prominent point of discussion worldwide. This increased concern contributed to enhanced interest and awareness of developing countries like Ethiopia on multiple environmental, social and economic benefits of the watershed management and development (Lakew et al., 2005 and WCED, 1987). Watershed management through the participation of the local community and involvement of different actors ensures sustainability and improved agricultural economy of upstream and downstream dwellers. However, the state-of-the-art of Wondo Genet Watershed in South Central Rift Valley Ethiopia is frustrating. For instance, illegal settlement, conflict over scarce resources, deforestation, erosion and land degradation throughout the watershed are some of the prominent hazards the watershed is hosting today (Melaku and Mersha, 2006). "Socio-political change, economic activities, population growth, cultural patterns and agricultural developments" intensify multiple claims over the forest resources in Wondo Genet watershed especially as a result of weak control and accountability over natural resources management (Gessesse, 2007). Watershed contains an array of interlinked and interconnected resources and activities irrespective of political boundaries which forms a dynamic and integrated biophysical, socioeconomic, environmental and political system (Vishinudas, 2006). Most watershed management fails due to lack of effective public participation and involvement of different actors even though the local communities are closest to the real problems (Lakew et al., 2005). Therefore, its management requires multi-disciplinary approach all aiming at improving the quality of life of the watershed's community.

This study was designed to investigate the condition under which participatory watershed management is possible in Wondo Genet watershed, South Central Rift Valley Ethiopia and more particularly to explore the participation of the local community and integration of different actors in managing land and water resources of

the watershed. Because, the involvement of the local communities and integration of concerned stakeholders is a base in managing a watershed resources sustainably.

1.2 Problem statement

Increasing competing interests and conflicts over scarce environmental resources in Wondo Genet watershed due to increasing population pressure and consequential economic interest is increasing tremendously. Increased illegal settlement and agricultural practice in the remnant forest of the watershed intensify over exploitation of existing scarce resources and recurrent conflict between and within the dwelling ethnic group (Tsegaye *et al.*, 2006). To alleviate these overwhelming natural resources degradation and increasing multiple competing interests, different scholars have commented management measures though it lacks clear demarcation on arising conflicts whether it is resource base, ethnic and/or political and integration of different actors. On top of this, even if there are appropriate technologies well suited with local situation are available for sustainable watershed management and utilization, participation of the local community, integration of the different role players and appropriate institutional settings within the national jurisdiction are crucial (Vishnudas, 2006). These discrepancies call for study public participation, integration of different actors and existing institutional setting in managing Wondo Genet Watershed.

1.3 Objectives of the Research

1.3.1 General objectives

To evaluate and recommend on public participation and integration of different actors in managing Wondo Genet watershed and implementation of the findings in integration with local policy, plan and program.

1.3.2 Specific objectives

- To identify the watershed services (the benefits people derive from ecosystem) and existing institutional set up in managing the watershed
- To evaluate the cooperation status of different actors in watershed management

2. Description of proposed study design

2.1 Research site

Wondo Genet watershed is located in the two regional states namely Oromia and Southern Nations and Nationalities Peoples Regional State (SNNPRS), Ethiopia. The watershed is a closed basin inundating with the rivers originating from eastern escarpment of the watershed. It encompasses the lowest peak in the watershed (1675masl), near the Hawassa Lake, to the peak mountain (2900masl), Abaro which lies at 6°45' N to 7°15' N latitude and 38°15' E to 38°45' E longitude (Gessesse and Kleman, 2007). The specific study sites hence set in a way it represents the watershed strata (upper-stream, mid-stream and the down-stream), interdependences, and watershed resources benefit sharing linkages among the inhabitants at the different strata. The lowest administrative unit (kebeles) fulfilling these criteria, namely: Wosha Soyama (the upper-stream and mid-stream) and Shasha Kekeli (the mid-stream and down-stream) were selected for this study. These kebeles were further divided into sub-kebeles.

2.2 Research methods

The problems arising and benefits rendered from the watershed would have significant influence over the whole ecosystem of the watershed. Therefore, the study took into account overall administrative structures (public sectors), Community Based Organizations (CBOs), Non-Governmental Organizations (NGOs) and private institutions having stake in conservation and management of the watershed and the general public. Interviews were conducted individually with professionals or representative of public sector at wereda level and NGOs within the watershed. Focus group discussion and interview was employed with CBO representatives and representative of different social categories. Verification of discussion results from Participatory Rural Appraisal (PRA) exercise used to interview of farmers, private and public sector actors in the watershed.

Evaluation of actors' integration in managing the watershed was used to assess the previous performance of the different actors in managing the watershed by using assessment criteria (indicators) developed and compare between existing statuses (baseline) against desired future participation (target).

2.2.1 Methods of data collection and analysis

In the assessment of institutional settings and integration of actors in watershed management, the detail procedure followed is as presented here below in figure 2.1.

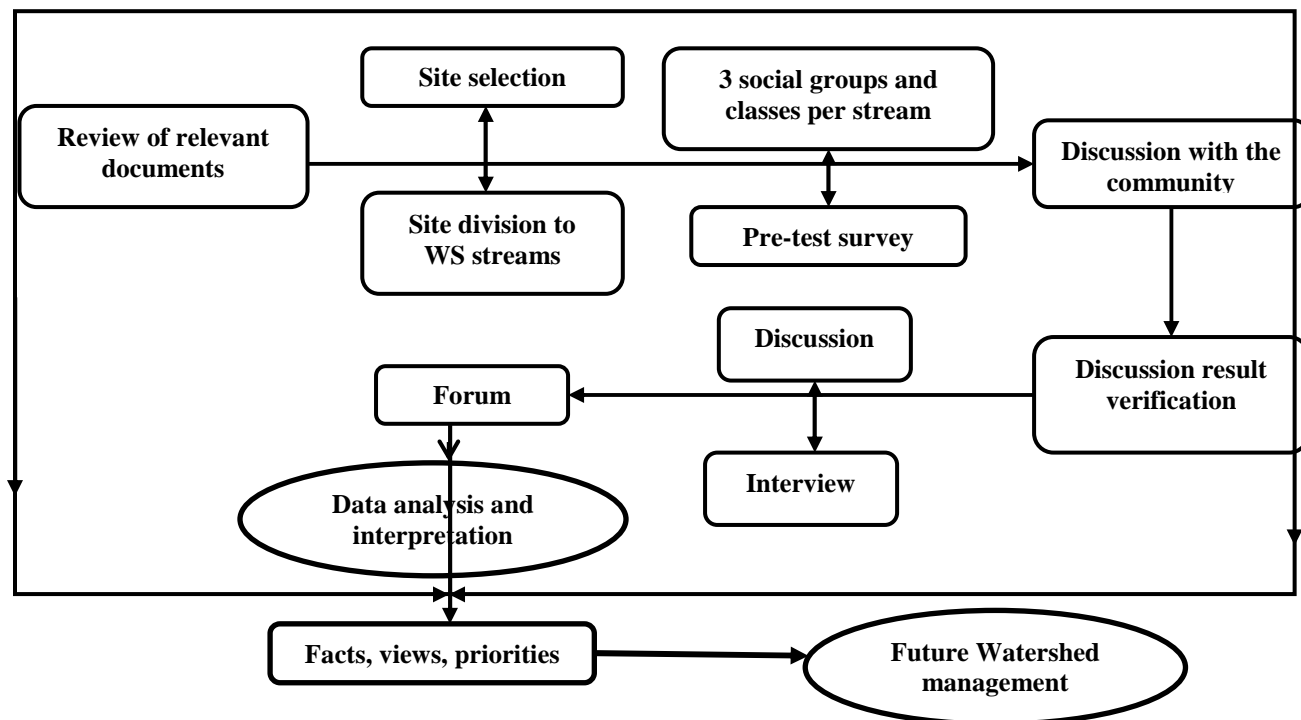


Figure 2.1: Procedure expressing flow objectives in the research process

Figure (2.1) shows specific study kebeles and sites selected, pre-test survey was conducted in the selected kebeles and other public and private sector actors in the watershed. The three social classes (rich, medium and poor) and focus groups (youth, females and elders) were set following the following steps. Five Key informant (KI) farmers knowledgeable and lived for more than twenty five years in each selected sub-kebeles were asked to list six farmers in their corresponding sub-kebeles by taking into account the different social classes. From each sub-kebele thirty (30) farmers, with equal proportion of the three social classes, were selected. Repeatedly nominated farmers were then ranked and seven farmers were selected randomly from poor, medium and rich categories of the list, for focus group discussion. The same procedures were followed for females and youths in the sub-kebeles selected.

Discussions were then conducted in each stratum with the different social groups on:

- Benefits of the watershed to the local community
- Trends of the watershed resources (water, forest, soil and other dependent variables) use and services and problem associated with it.
- Measures taken to minimize these overwhelming problems (by government, the community, other actors)
- Their feelings and commitment to conserve their farm and the watershed,
- How they have been and/or would like to be organized to manage the watershed,
- Opinions for future management

Discussion results during PRA process were further verified by individual interview with randomly selected 5% of the inhabitants in the sub-kebeles, and public and private sectors dependent on the watershed resources inhabiting in Shashemane, Wondo, Kofale and Wondo Genet woredas, and Hawassa and Shashemane cities.

Pre-test survey with private and public sector offices, and focus group discussion with a total of 85 individuals from different social classes and interest groups inhabiting in the selected kebeles were executed. The proportion of interest groups (elders, females and youths) are kept proportional (1:1:1) to avoid biasness.

The results obtained from the field works (interview) were analyzed quantitatively using SPSS statistical package; Agro-Ecological Knowledge Toolkit (AKT5) software to analyze local knowledge in trends of watershed resources status and causal chain of the existing environmental changes. The other formal and informal discussion results analyzed and presented using qualitative description.

3. Results and discussion

3.1. Local knowledge on watershed resources

Analysis of discussions on the status of natural resources of the watershed since the last twenty five years using Agro-ecological Knowledge Toolkit shows better understanding of the local people about their environment. The causal chain developed using the software is a witness reflecting farmers understanding on the cause, consequence and effects of watershed resources alteration. For instance, the causal chain described by local inhabitants showed population pressure, deforestation and weak legal enforcement as major issues aggravating watershed problems. The influence of deforestation on water availability, shifting mode of production from high water demanding crops (vegetables) to less water demanding and rainfed agriculture (khat and sugar cane) are well described. From these, it is possible to judge that the local inhabitants are well aware that unsafe use and alteration of the watershed resources would have significant influence over the whole ecosystem.

3.2. Integration of different actors in watershed management

Intensified illegal settlement, competition and conflicts over water, forest and land resources emerge since 1991 coupled with injury, life loss and asset devastation with an increasing trend since then. The number of springs, which was fourteen before fifteen years ago, is also only four now as mentioned by 41% of respondents. For instance, the number of injury which was only three in 1991 as 45% of the respondents reached thirty in 2011. There are a number of actors from individual farmers, investors, government and non-governmental offices, CBOs to religious institutions in and around the watershed dependent on the watershed resources. However, No one organization (Shebele hotels, the college, the research centre, private investors and others benefiting from the watershed resources) is integrating to tackle watershed problems. In return conflicts between and within ethnic groups, within and between stratum, security, and lack of attention, commitment and weak integration is mostly a reflection of the watershed. Participating farmers strongly recommended establishment of strong institution coordinates all sorts of activities associated with sustainable use of watershed resources.

3.3 Institutional settings of key role players in watershed management

In Wondo Genet watershed, key role players in watershed management are scattered among different offices, namely: Agriculture, Natural Resources, Mineral, Water and Energy, Irrigation and Land and Environment Protection offices. There is no clearly differentiated responsibility. For instance, Land Administration and Environment Protection office is considered as regulatory body while Natural Resources department under Agriculture office is operational body. Yet both offices are involving on similar activities. Water Board, responsible in drinking water supply has no any structure engaging on watershed management. Overlapping and bypassing of watershed activities by different offices is an important point to be considered.

4. Conclusions

Though the involvement of different actors in Wondo Genet Watershed management is significant, there is no commonly established system that pulls these actors together. Consequently an integral components of the watershed (forest, soil, water, etc.) fall under severe catastrophes., Farmers understood and knew the trend of watershed resources change, its impacts, implications and mitigation measures, however, increasing competing interests and recurrent conflicts over resources use limit their role to integrate and act commonly. Mandates of organizations and institutions in charge to organize and lead watershed activities are overlapping and/or missing resulting in vague responsibilities on who will do what. Smooth and peace upstream-downstream interdependences and linkages distorted since 1991 have been contributing for accelerated life and asset loss, injury and traditionally built water sharing strategies. Illegal settlements on sloppy upstream areas of the watershed covered by remnant natural forest and sensitive land clearances are altering the water tower of the watershed inundating vast area and the only fresh water supply sources of the catchment inhabitants and the ecosystem as a whole.

Conflict of Interest: The authors declare that they have no conflict of interest.

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