



МЕЖДУНАРОДНЫЙ ОПЫТ ГОСУДАРСТВЕННОГО УПРАВЛЕНИЯ

INTERNATIONAL EXPERIENCE OF PUBLIC ADMINISTRATION

DOI: 10.22363/2312-8313-2021-8-1-59-71

Research article / Научная статья

Community Participation in the Reduction of Land Degradation: The Case Study of Shebel Berenta District, Amhara National Region State

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Abstract: Shebel Berenta district is one of the highland areas of Ethiopia highly prone to land degradation and drought by the report of the UN Office for the Coordination of Humanitarian Affairs, (OCHA). Assessment of community participation to combat land degradation was the main objective of this study. Mixed research approach with concurrent triangulation design was followed. The target kebeles and the number of respondents were selected purposively. The sample size was found to be 368, which was determined by the Yemaneh (1967) formula and addressed through geographical listing method. Primary data was collected through Questionnaire, interview and FGD; whereas secondary data was also gained from researches, reports and different documents. The quantitative data was analyzed descriptively, and the qualitative data was analyzed using thematic analysis. The result shows that the trend of community participation is found to be decreasing/passive and dominated by the top down or planner centered approach of community participation as it was supported by 72.4% and 86.3% out of 149 and 219 total respondents from vulnerable and less vulnerable kebeles respectively. Incentives to inspire community participation are low and not adequate and resulted in the lack of willingness of the community. Lack of awareness, expansion of open grazing lands, lack of commitment from the people and government side, lack of consistency of Sustainable Land Management Practices (SLM), geographical barriers and others are the observed challenges of CP in the area.

Keywords: community, participation, land degradation, Ethiopia

Conflicts of interest: The authors declared no conflicts of interest.

Article history:

The article was submitted on 19.10.2020. The article was accepted on 15.11.2020.

For citation: Mengist A., Nurie E., Nega M. Community Participation in the Reduction of Land Degradation: The Case Study of Shebel Berenta District, Amhara National Region State. *RUDN Journal of Public Administration*. 2021; 8(1): 59–71. DOI: 10.22363/2312-8313-2021-8-1-59-71

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Участие сообщества в сокращении деградации земель: на примере района Шебель-Берента, национальный региональный штат Амхара

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Аннотация. Согласно отчету Управления ООН по координации гуманитарных вопросов (УКГВ), район Шебель-Берента является одним из высокогорных районов Эфиопии, который сильно подвержен деградации земель и засухе. Оценка участия сообщества в борьбе с деградацией земель была основной целью этого исследования. В исследовании применялся смешанный подход с одновременным дизайном триангуляции. Кебеле (сельские коммуны), и количество респондентов были выбраны целенаправленно. Размер выборки составил 368, что было определено по формуле Йемана (1967) и определено с помощью метода географического перечисления. Первичные данные были собраны с помощью анкет, интервью и ДДГ (десульфуризация дымовых газов). Вторичные данные также были получены из исследований, отчетов и различных документов. Количественные данные были проанализированы с описанием, а качественные данные были проанализированы с использованием тематического анализа. Результат показывает, что тенденция участия сообщества снижается, преобладает подход к участию сообщества «сверху вниз» и плановый подход, поскольку его поддержали 72,4% и 86,3% из 149 и 219 респондентов из уязвимых и менее уязвимых кебеле соответственно. Стимулы, побуждающие к участию сообщества, невысоки и недостаточны, также проявляется отсутствие желания участия со стороны сообщества. Недостаточная осведомленность, расширение открытых пастбищ, отсутствие приверженности со стороны людей и правительства, непоследовательность практик устойчивого управления земельными ресурсами (УУЗР), географические барьеры и другие проблемы наблюдаются в этом районе.

Ключевые слова: сообщество, участие, деградация земель, Эфиопия

Заявление о конфликте интересов:

Авторы заявляют об отсутствии конфликта интересов.

История статьи:

Статья поступила в редакцию: 19.10.2020. Статья принята к публикации: 15.11.2020

Для цитирования:

Менгист А., Нури Т., Нега М., Джмеберу Г. Участие сообщества в сокращении деградации земель: на примере района Шебель-Берента, национальный региональный штат Амхара // Вестник Российского университета дружбы народов. Серия: Государственное и муниципальное управление. 2021. Т. 8. № 1. С. 59–71. DOI: 10.22363/2312-8313-2021-8-1-59-71

Background of the study

Land is the most important natural resource all over the world. It is a place from which human beings are exploiting a number of resources [1]. The need to produce more is increasing from time to time due to an increase in population. However, land is losing its productivity due to a rising trend of land degradation [2]. It is estimated that 2/3rd of African land is already degraded to some degree and land degradation affects at least 485 million people or sixty-five percent of the entire African population [3].

Though Ethiopia is one of the well-endowed countries in sub-Saharan Africa in terms of natural resources and valuable diversity in the production

environment, it has been affected by the interlinked and reinforcing problems of land degradation [4; 5].

In Ethiopia, land degradation is a major cause of the chronic food insecurity widely experienced by the country's largely rural population. In rural (mainly highland) areas, around 50 percent of the land is classed as degraded [6]. As the majority of Ethiopian agricultural lands are found in semi-arid regions, it makes the country to be susceptible to land degradation and desertification, given the fragility of dry land soils. 70% of Ethiopia is reported to be prone to desertification [7]. To overcome these problems, efforts have been made to launch afforestation and conservation programs; however, success to date has been limited.

Since 1970's efforts have been made to rehabilitate degraded environments and stop the degradation processes. The largest work was that carried out between 1976 and 1988, in which communities were mobilized to participate either via food for work payments or just by force. Over this period, about 800,000 km of soil and stone bunds and 600,000 km of terraces were constructed; about 500 million tree seedlings were planted; about 100,000 ha of land with slopes of over 60% were closed for natural regeneration; and check dams were constructed along gullies over tens of thousands of km. The total area that was covered by these rehabilitation and conservation works was estimated at only 7% of the highlands that needed treatment. At that rate, it was feared, all the area in need of treatment could take some 70 years for rehabilitation.

The UN *OCHA* [8] draws the following map of Ethiopia and tries to show the drought affected areas and the causes. Accordingly, the Eastern part of East Gojjam zone is identified as one of the droughts affected areas because of the poor summer rain of 2015. As a result, many people were starved and since then the area is sensitive to drought and land degradation problems.

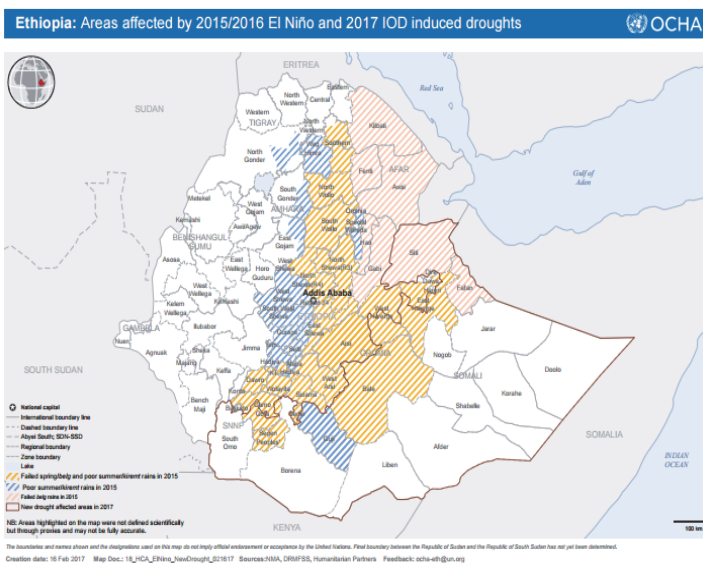


Fig. 1. Areas Affected by 2015/16 El Niño and 2017 IOD Induced Droughts by OCHA

This land degradation is mostly caused by soil erosion, deforestation, over grazing and population pressure. Therefore, assessing the level of community

participation towards combating land degradation is the main issue discussed in this paper.

Statement of the Problem

The concept of community participation (CP) is essential to the modern development processes. The governments and international community call for people involvement in development process that directly affect their life. Community may participate in different development activities such as building infrastructures such as roads, health services, environment protection, etc. The core issues related to CP are the involvement of people or community in development processes. It is the active voluntary engagement of individuals or group of people to change problematic conditions and to influence policies and programmes that affect the quality of their life and the life of others. Currently, participatory approach has been advocated as a modern approach of achieving development [9].

In Ethiopia, the heavy dependence of people's livelihoods on agriculture and inappropriate use of natural resources resulted in fast and vast land degradation [10]. On the other hand, development of agricultural sector partly depends on land productivity. However, this resource is seriously threatened by land degradation and aggravates the food insecurity problems in the country through its adverse impact on crop yield. The country could not feed its population at present and it will have difficulties doing in the near future partly due to serious land degradation [10].

To solve the problems of land degradation in the country, many efforts have been made since 1970s. A large number of soil and water conservation activities were implemented in different parts of the Ethiopian highlands in the 1970s and 1980s with a huge resource obtained from international community, particularly World Food Program (WFP).

Many researchers have done studies on land degradation in different parts of Ethiopia. For instance the study of Mesfin identified the challenges and prospects of land rehabilitation practices: a case of Angacha District, Kambata Tambaro Zone, SNNPR; Assessment of community participation in Sida's district support program activities in Amhara region: The case of Awabal district [9]; determinants of land degradation in the Lake Tana basin and its implications for sustain SLM: the case of Angereb and Gish-Abbay Watersheds [11]; CP and sustainable soil and water conservation management; the case of Zala-Daget Project: Dogu'a Tembien District, Tigray highlands [12]. Most of these researchers generally found out that there is High degree of LD in Ethiopia in general and in the highland areas in particular. However, as far as the researcher's knowledge is concerned, there is a research gap on the issue of what factors contributed behind the low participation of the community in combating LD. The study area however is identified as one of the places which were affected by El Niño and Indian Ocean Dipole (IOD) induced droughts for the last three years (2015–2017) by the study of the UN OCHA [8].

In an attempt to contribute in bridging the above stated gap, the study will focus on assessing CP in combating land degradation in East Gojjam Zone with specific case in Shebel Berenta District.

More specifically the study was interested to achieve the following objectives; to explore the extent of CP in combating LD, to identify the major challenges that hinders the participation of community in the reduction of LD in the study area, to assess the role of local government authorities in promoting CP towards the eradication of LD and, to examine the perception of the local community towards CP.

Theoretical and conceptual Frameworks

Several scholars recognized that real, people centered, active participation leads to development, which is truly empowering, whilst planner centered participation tends to be nominal with local people acting as the passive recipients of development [13]. The assumption is that local populations have greater interest in the sustainable use of natural resources around them than distant government.

The conceptual framework lies in explaining land degradation as the result of complex and multi-faceted factors; Ethiopia is among the poorest of countries and poverty and land and resource degradation appear to feed off each other [14]. The following chart explains such factors

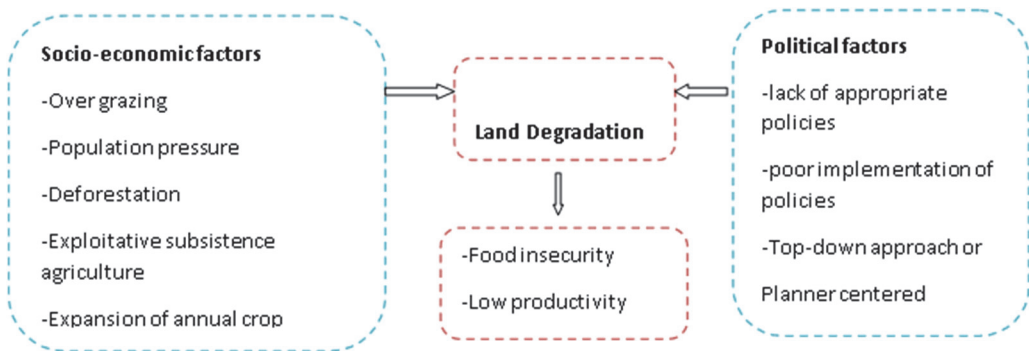


Fig. 2. Conceptual Framework
Source: [14].

Description of the Study Area

Shebel Berenta district is one of the 105 districts which is found in East Gojjam Administrative zone, Amhara National Regional State. It lies within 100 15' N to 100 30' N and 380 15' E to 380 27' E. It is found at about 293 km NE of Addis Ababa and about 28 km from Bichena. The district is bounded by South Wello zone in the east, Enargienawuga district in the north, Enemay and Dejen district in the northwest, and Oromia zone (Dera district) in the south. (Fig. 3). According to the 2007 Census, the total population of the district is 125,572 inclusive of the urban population. The district is organized into 19 kebeles (sub-districts) [15].

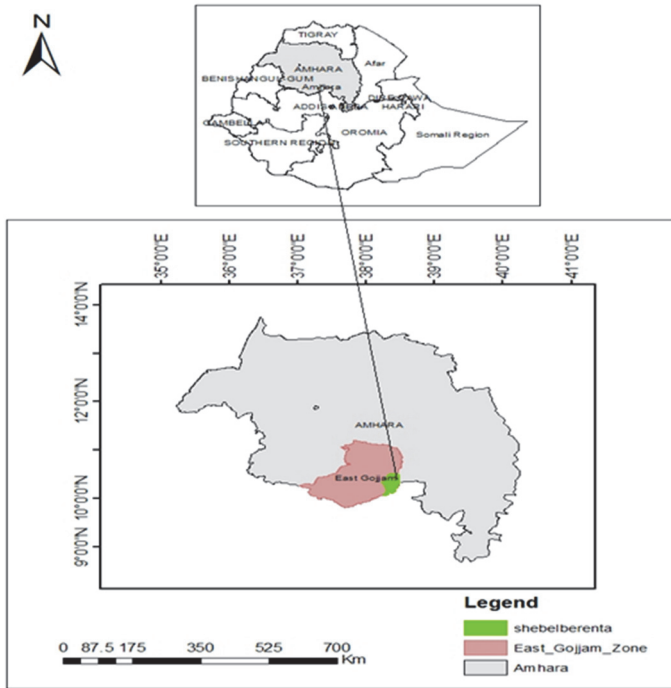


Fig. 3. Map of the Study Area
 Source: [15].

Justification for Selection of the study Area

The reason behind the selection of Shebel Berenta District is due to the fact that the region is one of the highland areas of Ethiopia highly prone to land degradation and drought[8]. In an effort to alleviate this problem measures like soil conservation, afforestation, and other mechanisms were employed. Although these efforts were made the problem is still severe. According to the researcher’s empirical observation and informal interview with East Gojjam zone land administration department officers, the situation of land degradation in the region is worsening and lacks adequate community participation.

Methodology of the Study

Both quantitative and qualitative methods with concurrent triangulation design, seeking to confirm, cross-validate or corroborate findings and used to overcome a weakness in one method with the strengths of another, were adopted. Using a combined approach would therefore enable the researcher to “collect numerous forms of data and examine them from various angles to construct a rich and meaningful picture of a complex, multifaceted situation” [16].

The quantitative data was gathered from respondents resided in both vulnerable and less vulnerable kebeles of the study area (where the sample size was determined by Yemane, 1967 formula), and the qualitative type of data was gathered through FGD and interview. Farmers, officers from the District Agriculture and Rural Development Office has been participated. Finally, the data was analyzed through descriptive and thematic analysis. The trustworthiness of the study was assured by preparing the questionnaire and interview guideline and evaluates by professionals until the end of the data collection process. We also

used colleague and peer review throughout the whole research process. Furthermore, to maintain its reliability, triangulation was done.

Table 1

Sample Size

Kebele Name	Members of PA’s	Male	Female	Male samples	Female samples	Total
<i>Ansheb</i>	927	745	182	58	14	72
<i>Gebisit</i>	989	817	172	64	13	77
<i>Mozen</i>	1575	1227	348	96	27	123
<i>Gedaeyesus</i>	1234	1015	219	79	17	96
	4725	3804	921	297	71	368

Source: compiled based on the annual report of the district environmental protection office (Own survey, February 2019).

Interpretation of Results and Analysis

This study is based on the land care approach of UNCCD where people centered community participation as [17] is important to ensure sustainable land management to protect dry lands and reverse the degradation of productive lands. Land care provides a sound, knowledge-based approach from the bottom up, and it is similar with the White’s (1996) active community participation which further is linked with the general Participatory Rural Appraisal (PRA) approach.

According to the report of the district crop production team leader, currently though there are around eight community groups/teams that are established to execute the task of environmental protection activities, only peasant development association is active, others are passive, pseudo groups and even some of them are on the verge of demolish. Therefore, the researchers were interested to draw samples from this group for questionnaire and the team leaders, together with the district crop production department and the head of environmental protection were addressed through interview.

The eight community organizations established for combating LD in the study area includes: Peasant Development Associations, 1 to 5 Development Associations, Central Committee Association, Youth’s Association, Cell Management, Civil Servant’s Association, Evaluation Team and Women’s Team.

Trend/Extent of CP

The perception of farmers towards CP for combating LD and the trend of participation are discussed. To do so respondents from the vulnerable and the less-vulnerable areas were asked four questions. Table 2 summarizes the questions asked and the responses.

Government takes the lions share in motivating the people to participate in SLM projects. The tendency for such activities to be emerged from the people is found to be low in both groups of participants. It shows that the domination of “planner centered” approach or the top-down type of community participation

adopted by Theron one-way flow of information from the planners to the community which is labeled as non-inclusive and less effective level/type of participation. Bersisa and Melesse [17] further founded that natural resource conservation approaches were not based on genuine CP.

Table 2

Trend of CP at Shebel Berenta District

No.	Item	Response	Vulnerable kebeles		Less Vulnerable kebeles	
			Freq.	%	Freq.	%
1.	the level of CP	Increasing	41	27.6	30	13.7
		Decreasing	108	72.4	189	86.3
2.	Who motivates the you to engage in protecting LD	Government	98	65.7	158	72
		The people	24	16	20	9.3
		NGOs	36	24.3	41	18.7
3.	Reason to participate in protecting LD	Fear of punishment	109	73	61	27.8
		Peer pressure	25	16.8	156	71
		To save nature	15	10.2	2	0.9
4.	Incentives by the government or NGOs	Yes	63	42.3	201	91.7
		No	86	57.7	18	8.3

Source: own sample survey, May 2019.

This argument was also supported during the FGD discussion held at Ansheb kebele. Discussants said that all of environmental protection projects are initiated totally by the government bodies and they lack consistency (FGD, Ansheb May 2019).

(73%) of respondents said that fear of punishment is the major reason to participate in combating land LD vulnerable areas. In less vulnerable areas the reason is found to be peer pressure (71%) and to some extent fear of punishment at is supported by 27% of them. The tendency to use forceful measures had been practiced in similar activities in Ethiopia during 1976 and 1988 as Berhe and Chadhokar stated. Popular participation should be based on the interest rather than intimidation and punishments from the side of the government. In any case, it can be a witness that the people have negative attitude towards community participation.

42.3 % of the respondents from vulnerable areas said that there are incentives coming from either governmental or NGOs, whereas 97.1% of the respondents from the less vulnerable areas said that incentives in the form of trainings, supply of improved seeds and other farming technologies are available. Hence one can infer that vulnerable areas are a little bit marginalized as far as incentives are concerned.

As Badege [6] argues economic incentives are very important aspects of PRA and should be implemented by rural people which may involve supplying seeds and seedlings, either free of charge or at a nominal price, ensuring an

adequate supply of hand tools, temporary food aid and encourage them to engage in environmental conservation activities, as it was done during 1970s and 80s by WFP. In due course the absence of incentives as in the case of the vulnerable areas makes the community to be bored and reluctant to preserve the environment.

The role of Governmental and Non-Governmental organizations for CP

Agri-service, Red Plus, Safety Net and PFM (Participatory Forest Management) are some of the NGOs working in the area. An interview with the head of the district environmental protection office shows that NGOs are mostly engaged in delivering trainings, biological works like afforestation and establishing “model rehabilitated sites” so that it can be shared by farmers and expanded to other areas.

Table 3

The role of Government and NGOs in supporting CP

No.	Item	Response	Freq.	%
1.	the kind of support gained from government and non-government sectors	Material	19	5
		Trainings	298	80.9
		No support at all	51	13.8
2.	When you visited by such agents	During field work time	25	6.7
		After the field work	187	50.8
		Before the field work	105	28.5
		Before and after field work	51	13.8
3.	the role of these agents when they came to you	As a facilitator	46	12.5
		As a visitor	225	61
		As evaluator and punisher	97	26.3
4.	describe the level of support	Sufficient	21	5.7
		Medium	61	16.6
		Insufficient	286	77.7

Source: own sample survey, May 2019.

Accordingly, 80.9% of the total respondents said that the support coming from concerned bodies is in the form of trainings while 13.8% of them replied that they don’t get any kind of support. They added that such bodies visited them mostly after the field work as it is supported with 50.8% of the respondents. 28.5% of them however said that they are visited even before the field works. Insignificant number of respondents argued that the visit is during the field work (5%). This argument was supported with the FGD held at Yeduha town (March 2019). The Ethiopian environmental policy assures that the government shall provide the necessary technical, material and financial supports to empower and participate local communities in resources and environmental management.

Key informant interview at Geda Eyesus was found important with the above table. It stated as

“The kebele extension and crop production officers are always busy at meetings at district level; they meet with the local rural community some days usually on Sunday or during some particular religious’ monthly festival. It is

rarely possible to get them with the community at the filed. They consider themselves as a king and we frightened them” (interview with a farmer at Geda Eyesus, March 2019).

Finally, the level of support from government and non-government bodies is rated as insufficient by 77.7% of the respondents and medium by 16.6% of them.

Challenges of Community Participation in Relation to Land Degradation

It is important to rank the challenges to community participation and the overall SLM practices in their order of influence. Reminding that vulnerable and less vulnerable areas may face different challenges and they will rate according to their respective order of influence.

Table 4

Challenges of CP in vulnerable and less vulnerable areas

No.	Factors influencing CP negatively	Vulnerable areas			Less vulnerable areas		
		Rank	Freq.	%	Rank	Freq.	%
1.	Expansion of open grazing land	1	67	44.9	1	85	38.8
2.	low commitment of government	2	63	42	2	72	32.8
3	Geographical barriers (steepness, aridity and remoteness)	3	54	36	8	30	13.6
4.	Low level of awareness	4	46	30.8	7	38	17
5.	Shortage of land	5	40	26.8	6	48	21.9
6.	Lack of consistency	6	38	25.5	4	66	30
7.	No incentives	7	27	18	3	70	31.9
8.	low community willingness	8	23	15	5	54	24.6

Source: own filed survey (March, 2019).

As indicated in table 4.4 above, eight influencing factors are identified which affects the low level of community participation in the study area. Expansion of open grazing land and low commitment of government contributes a lot for the passive trend of community participation in both vulnerable and less vulnerable areas as it is ranked first and second by 44.9 % and 42% in vulnerable areas and 38.8% and 32.8% in less vulnerable areas respectively.

Geographical barriers like, (steepness, aridity and remoteness) of the area is the third factor curbing community participation. According to the interview data gained from the district agriculture office, kebeles near to the Abay gorge (bordering Wollo [18]) are very susceptible to land degradation and drought problem as the physical topography is not comfortable to SLM works. To the opposite, topography is relatively no longer a bigger challenge for the less vulnerable areas.

Lessons where Vulnerable Kebeles Could Learn from the Non-vulnerable Ones

There are indigenous and modern techniques SLM practiced in the study area mainly to conserve the environment and curb LD and related problems. They

are grouped in to physical and biological works. Physical works includes those activities done on the topography to change the structure so that it could be more conducive for curbing soil erosion and other problems. Examples of physical works are terracing, area closure, check dams etc. Biological works are those activities which are done to preserve the biodiversity for instance afforestation, community forestry programs, production and cultivation of seeds, trees and other plants and adopting model areas. These tasks are implemented in both areas. But due to geographical barrier vulnerable areas do not get adequate incentives from the concerned governmental and NGOs. Researchers observed that all the model areas (biological tasks) have been done in less vulnerable areas, which are near to the town. In addition, the community resided in vulnerable kebeles should build infrastructure, especially road and increase the accessibility of the locality to transportation so that it can get adequate incentives and support from the concerned bodies.

Concluding Remarks

As the El Niño global climatic event significantly affected the 2015 meher/summer rains on the heels of failed *Belg/ Spring* rains in 2015, driving food insecurity, malnutrition and serious water shortages in many parts of the country and particularly Shebel Berenta is one of such areas which seriously threatened.

The results show that the community is found to be more effective in their private plots than communal tasks. The willingness for community participation is low, fear of punishment from the government and peer pressure is the motivating factor for the vulnerable and the less vulnerable areas respectively. Even though incentives are very important aspects of PRA and should be implemented by rural people to inspire them, government is failed to generate adequate incentives.

Trainings are given sometimes for group leaders, but there is no government body, including the kebele extension worker who visited them during the field work. Ultimately, the level of support from government and non-government bodies is rated as insufficient.

Community participation in the study area is found to be passive and faced with the following major challenges; projects lacks consistency, low commitment from the side of government and no willingness of the community, expansion of open grazing land, geographical barriers, lack of incentives, shortage of land and the like.

Recommendations

Based on the findings of the study the following possible propositions are suggested.

The old model or the top-down approach is still dominant, and it needs to be evaluated at the field than merely accepting the weekly or monthly reports. Adequate awareness about the participation, environmental problems, the possible causes and consequences of environmental problems and incentives should be given to the local community since we observed low perception of farmers

towards community participation and most of them are being hesitant probably due to lack of awareness. The district local government should adopt guidelines and can determine the maximum number of cattle per household or tightening the way where and how animals should stay.

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