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Impacts of Drought and Conventional Coping Strategies of Borana Community, Southern Ethiopia

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Abstract
This study was undertaken in southern Ethiopia to evaluate impacts of drought and pastoral's coping strategies in southern Ethiopia. With multi-stage sampling method, 199 respondents' households were selected. The survey results show that drought has severely affecting the livestock resource basis of the pastoralists. Especially, the water sources for livestock; pond and deep well; dried out during pick drought season besides the degradation of rangeland resources. Beyond pastoral focus strategy, however, revision of pastoral policy need a special attention to reduce the susceptibility of pastoralists to recurrent drought. Especially, development of viable pastoral strategy for drought need strong and urgent linkage with other development and research actors to invert the socio-economic and ecological devastation of the drought.
Keywords: Borana, coping strategies, destocking, Drought, drought impact, pastoral, trade off

1. Introduction

Ethiopia is repetitively exemplified as the potential country in livestock resource (Shapiro *et al*., 2015). This resource forms an integral part in the agricultural system and basis of livelihood for larger rural and semi-urban population. In pastoral areas, beyond the economic advantage it matters a cultural prestige and social status of the society (Coppock, 1994). Livestock, especially cattle, plays a leading role in determining the social position of the pastoral households in the society besides its crucial role in cultural heritages and economic welfares.

However, the anecdotal evidence indicated that the percapita livestock in the pastoral area is radically decreasing than ever. The intellectual evidence also indicated that the livestock percapita of pastoralists are diminishing from 4.1 to 2.3 TLU[1] and more recently found 1.9 TLU (Bekele, 2013). However, in sight of self-reliance study indicated that the standard livestock per capita for self-sufficiency was accepted to be 3-4.1TLU and 7TLU per person for agro-pastoral and pure pastoral community respectively (Sandford, 1983; Lybbert *et al.*, 2004). However, the decline in livestock percapita and resultant shifts in households' wealth ranks over a period of years reflect the erosion of pastoral economy (Little *et al.,* 2006).

On the other hand, the customary counsel from Borana pastoralists also advocated that drought cycles have shortened from 5-10 years to 3-5 years (Oxfam, 2011). As a result, the density and reproductive performance of livestock have been reduced to the lower level despite the fact that livestock mortality was increasing (Herrero *et al*., 2010). However, pastoralists are struggling to overcome the risks of drought using different coping strategies.

However, increase in drought duration, intensity and coverage aligned with erratic, highly intensive and short duration rainfall has delimited the conventional coping strategies (Skinner, 2010). Particularly, the conventional coping strategies are highly tempted to cope with the recent impacts of climatic threat (Coppock *et al*., 2008). Hence, it is important to indicate the evidence that how much the drought is affecting the pastoral society for further groundwork and interventions. Thus, this study is the updates of the recent drought impacts which the pastoralists are fearing it's subsequent drought cycle.

2. Methodology

2.1. Sampling procedures

During this survey, the occurrence of drought is common to the whole lowlands Borana zone though its effect was varying across location. However, this study was focused on the seriously affected districts from the 13 districts in Borana zone. Accordingly, *Yabello* and *Dirre* districts of Borana zone were purposely selected with the main criteria of the severity effects of drought report from Borana zone.

Accordingly, the most seriously affected districts, Yabello and Dirre, was purposely selected. Then, these two districts were stratified according to their farming system as pastoral and agro-pastoral area. Finally, 199 respondent households were randomly selected from randomly selected Peasant Associations classified under pastoral and Agro-pastoral livelihood practices.

2.2. Methods of data collection and analysis

Primary data was collected from sample households using a semi-structured questionnaire. In order to capture

[1]1 TLU (Tropical Livestock Unit) = 250 kg live weight (Coppock, 1994)

better socio-economic context of the area, qualitative data collection such as focus groups discussion (FGD) and key informants interview was conducted using checklist questionnaires. The survey questionnaire was pre-tested before commencing the actual data collection to make contextual modification. During field study, three FGD with members of 6-12 with a combination of youth, women, men and elder households was undertaken. Additionally, three discussion and interviews with key-informant was conducted to verify the information from individual survey. Finally, secondary data was collected from respective office in Borana zone to enrich the data collected from the households.

3. result and discussion

3.1. General characteristics of the study area

Borana zone is characterized by arid and semi- arid agro-ecologies. The average annual rainfall ranging from 500 to 600m a.s.l and the annual temperature range 25-35C^{o} (Coppock, 1994). The main rainy season (*Ganna*) extends from March to May whereas the short rainy season (*Hagayyaa*) lasts from October to November followed by the long dry season (*Bonaa*).

3.2. Livelihood portfolio

3.2.1. Livestock production

Livestock production is the main livelihood basis of the Borana pastoralists **(Tolera and Abebe, 2007). Especially,** female livestock is the basis to persist the production of livestock beyond its reproductive character. The survey result indicated that the female livestock is the dominant in livestock composition of the households. Particularly, at the productive age (>3 years) the population of female livestock is more than 366% of the total male livestock population and higher as the age category increases. This indicates that pastoralists by its nature preserve the female livestock by reducing the size of male livestock to achieve higher livestock mass.

Table 1. Herd composition

Age category (year)	Sex	Cattle	Camel	Sheep	Goat
Above 4	Male	1.16	0.25	0.06	1.17
	Female	150.16	0.77	4.01	3.04
3-4 year	Male	0.67	3.41	0.06	0.73
	Female	1.08	0.18	0.19	16.42
2-3 year	Male	57.91	0.14	0.08	0.91
	Female	24.36	0.14	0.15	1.58
Less than 2	Male	0.57	0.06	0.09	13.22
	Female	0.82	0.91	0.14	4.91
Other to cattle ratio (%)		**-**	**2%**	**2%**	**18%**
Total (TLU)		**236.73**	**5.86**	**4.78**	**41.98**

As compared to other livestock, cattle are the dominant livestock species. The survey result also witnesses that the proportion of ***other livestock: cattle ratio*** is very low except goat. Following cattle, goat is a very important livestock types especially vis-à-vis drought resistance. Other scholar finding also indicated as compared to earlier decades, the proportion of the other livestock types are increasing due to susceptibility of cattle to drought (Megersa, 2013).

3.2.2. Crop production

Crop production become a complimentary alternative livelihood option as compared to earlier decades. As a result, the households are increasingly practicing farming as compared to the last four decades where almost no households involved in cultivation (Desta and Coppock, 2004). However, since recently larger numbers of pastoralists have been engaged in cultivation at a cost of rangeland (Desta, 2011).

The survey result signposted that the respondents have about 1.9ha average farm land which is not expected in pastoral area. From these farming households, about 60% of the households have farmland around their home stead. However, the crops production was deprived of by different environmental factors though the pastoral communities were considering farming as a new opportunity to diversify their economy given the pressure on rangeland (Desta and Coppock, 2004). Diversification is typically, expressed in a form of increased involvement in crop cultivation and camel husbandry.

3.3. Effect of Drought

In Borana zone, prolonged and recurrent drought is the most typical corrupted events of climate change. Remarkably, drought cycle has been shortened than earlier that increase its risk (Oxfam, 2011). As a result, reproductive performance of livestock was reduced despite the fact that livestock mortality is increasing (Herrero *et al*., 2010). Specifically, the effect of drought can be conveyed as follow.

3.3.1. Disrupts the livestock composition and size

The frequency of drought coupled with the recovery periods of livestock was highly disrupts the livestock size and compositions. Especially, cattle are the most vulnerable livestock type observed in Borana zone. The survey result attested that from the livestock died during filed study about 68% were cattle. On the other hand, the maximum size of the livestock in the study area was highly reduced within a decade by 315% (Fig 1). As a result, today the households without livestock are eventually increasing that enforced to search for alternative livelihood system particularly to crop farming.

On the other hand, the proportion of goat to other livestock was increasing in spite of the recurrent demolition effect of drought. It is a clear indication that goat population are ascended due to its reproduction frequency characteristics, drought resistant, low feeding cost, economical purchasing cost and management especially during feed shortage. As a result, the population of small ruminant are relatively increasing than other livestock, cattle, though social affairs is favoring cattle (see table 1). The data from survey indicated that even the maximum size of livestock is decreasing from time to time over a decade as indicated below (Figure 1).

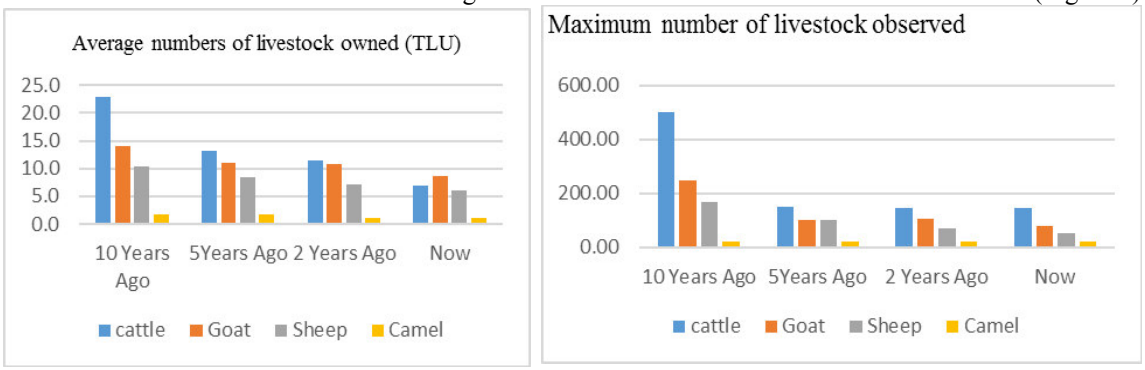

Figure 1. Livestock composition in a decade

3.3.2. Livestock mortalities

Livestock loss to drought are particularly higher among certain species, age and sex classes of livestock (Coppock, 1994). The survey indicated across livestock types about 68%, 15%, 6%, 5%, 4% and 2% were cattle, mule, goat, sheep, donkey and camel respectively were died. This implies that cattle, the main asset, more susceptible to drought relative to other livestock. Furthermore, the survey data indicated that from the whole livestock types, on average about 63% of the total livestock died were female in general. Explicitly, about 60% of cattle, about 79% of camel, about 59% of sheep, about 72% of goat died were females. This implies that female livestock are more susceptible to the drought shock. Ultimately, the effect of drought is higher in reducing the production performances of the livestock.

Generally, cattle are the most affected livestock type during severe drought due to higher input requirement than other livestock types. Yet, it is the potential top priority of the society due to its principal role in socio-economics and cultural heritage such as higher favorite for cultural heritages, extent of social position, higher livestock product, higher selling prices and higher sources of consumptive sources. However, small ruminant mortality rate was lower than cattle due to their versatility for drought, their prolific nature and adaptability of their physiological make-up. Field data, shoat marked about only about 11% of total livestock death during field survey. Moreover, camel registered the lowest mortality rate, only 2%, which demonstrates its better tolerance.

Generally, the vulnerability rank can be aligned as cattle, sheep, goat and camel from highest to lowest. Camel is the least vulnerable livestock to drought due to its adaptive capacity to the harsh environment.

Table 2. Livestock death during recent drought season

Livestock type	N	Maximum (TLU)	Mean (TLU)	Std. Deviation
Cattle	84	94.5	8.323	21.68
Camel	67	3	0.18	0.6
Sheep	78	7	0.501	11.5
Goat	82	7.8	0.501	12.54
Donkey	73	5	0.235	1.56
Mule	72	21	1.106	5.18
Total	199	138.3	10.846	-

3.3.3. Food insecurity

The effect of drought is clearly visualized on the forage and water resources where the livestock is totally dependent on to provide food. These resources are totally dried-up during drought season. As a result, the food insecurity manifests in the home of each households beginning from a very poor (resources poor) households.

However, though the society need helps to withstand the shock of drought, most of the households were not access to sufficient aid services. Moreover, the aid assistant provided was typically focused on lifesaving strategies. From the survey result, only about 39% of the households have receives external food assistants. From these receivers, about 77% of the households were received food aid. However, only about 5% and 8% of the respondent households were received animal and animal feed (hay, straw, crop residue) respectively.

Generally, the aid assistant provided to the drought affected area was biased to live saving in spite of building future capacity. As a result, the livelihood of the pastoralists is in a downward trend and become sever from time to time.

3.3.4. Unsettle agricultural market

Agricultural marketing system is highly affected during drought season. During field survey, the elites outlined that regardless of other factors, drought has prominent impacts on the prices of livestock and livestock supply. At the early start of drought, the pastoralists were flooding its livestock due to fear of livestock death. During this season, the water resources and pasture availability become declining than the normal season which result in deterioration in body condition of the livestock.

However, during the drought season both the prices of the livestock as well as the body was badly deflated. However, though buyer were a problem, the communities were reluctantly supplied their livestock at the severely low prices. During post drought, however, the body condition and price is gradually risen subject to the encouraging availability of water and forage. As a result, the supplies of livestock declining that escalate the livestock prices.

On the other hand, the price of all staple grains show upward trend throughout the peak drought periods. As a result, the terms of trade of livestock-grains is decreasing which induces food insecurity in pastoral areas especially in the home of poor households. Both livestock and grain prices register high seasonal variations with different elasticity direction. Accordingly, as the livestock prices drop towards the end of the dry season, because of animals' weight loss, the grain prices tend to rise because of supply shortage and increased demand. This implies that to feed the families more number of animals should be disposed to market which critically affects the future asset of the households.

3.3.5. Land degradation

A fall in forage availability due to low rainfall is the first main effect. During the pre-drought periods, the majority of the pastoralists and agro-pastoralists perceived that the availability of forages was inadequate due to the failure of the short rainy season. The shortfall of expected long rainy season following the peak dry season pronounced the progression to the peak drought phase. As a result, the forge seedbank would unable to germinate due to insufficient rainfall.

3.3.6. Other socio-economic crisis

Drought was the leading prominent factors of livelihood in dryland of Borana that they were suffering from. However, the principal cause of drought is the consecutive fail of rainfall in the consecutive rainy season. Precisely, the decline of Hagayyaa (short rainy season) rainfall followed by Ganna (main rainy season) rain fail causes a complete drying-off of the surface water resources. Moreover, following the failure of consecutive rainy season, it results in shortage of livestock feed. As a result, migration become the only option for search of water and livestock feed if the condition become worsen. Moreover, resources base conflict is another evil image of drought outcome that result in human life loss, livestock smuggling and driven migration. The primary effect of drought is clearly visualized on those two main important resources; namely feed and water. These are also the foremost causes of ethnic conflicts in southern Ethiopia.

Access to infrastructure is another challenge during drought. Particularly, during drought induced migration though access infrastructure depends on the direction of migration, it was difficult to access the nearby school due to migration has no cutting-edge time that depends on mercy of God. So, the student certainly dropout during migration and resume after returned to their homestead. However, the distance to these infrastructures such as market places and veterinary post is. Migration is, however, the most perilous option due to its full package of every trials in human being. Along the migration routine, the households face variety of difficulties which inflate the severity condition of migration. Among the major tortures lack of conducive shelter, disclosure to predators (like snake, herbivores etc.), lack of clean water and other economic costs. Moreover, the migration of parts of or the whole family creates additional cost such as resource share among family, creates a psychological tension and economic cost of establishment. Additionally, distances from public infrastructure and facility exacerbates the other problem like veterinary cost, livestock death, human disease, low livestock price, corruption and counterfeit buyers and ethnic conflict.

3.4. Drought coping strategies

Coping strategies refers to the strategies that have evolved over time through peoples' long experience in dealing with the known and understood natural variation that they expect in seasons combined with their specific responses to the season as it unfolds (Cooper *et al*., 2008). In southern Ethiopia, pastoralists have been developed

various possible coping strategies to overcome the distress effect of drought through their experience. However, the increased frequency of drought threatens to overwhelm these coping mechanisms and resilience of the pastoralists (Stark and Ejigu, 2011).

Hence, it is important to group these coping strategies to ease the discussion based on different natural and environmental characteristics. These include weather, livestock, rangeland and water related strategies as discussed in the subsequent section here after.

3.4.1. Livestock-related coping strategies

The livestock-related coping strategies include reducing livestock size, livestock mobility, livestock diversification and livelihood diversification among the major. During this study, about 33% respondent households were employing this strategy. Though livestock is still constituted the most crucial component of Borana livelihood, the survey result indicated that pastoralists are eager to reduces their livestock size and even diversify to the drought resistant livestock types.

From these strategies, herd mobility is one of the long history livestock related coping strategies that dictated by season and the availability of forage, as well as personal relationships, family structure, and immediate demands in search of water and pasture. Nowadays, herd mobility was highly confronted by different factors such as expansion of farm land, land degradation and bush encroachment.

3.4.2. Water related strategies

Water resources is a key resource affected during severe drought. Moreover, built a water harvesting scheme such as deep well and shallow pond to harvest available rain water both for human and livestock drinking also common. However, relative to the past 10 years ago, the average distant to the water was reduced both for livestock and human creature owning to intensive water development to overcome sever water shortage. However, still the favorable quality of drinking water is a challenge.

As compared to the dry season, the average distances from water sources is much lower in wet season. However, it need an integrated effort to develop sufficient potable water or water healing mechanism to overcome problem related to water cleaning issues.

3.4.3. Other common strategies

(a) Digging of shallow pond (dry season) (b) Fetching drinking water from the pond

Figure 2. Water development and utilization during the recent severe drought

3.4.3.1. Migration

Migration is realized as coping strategies in step-by-step manner that depends on the severity condition of drought. Based on the status of forage and water condition, the first action is separating and letting the lactating cow and calves around home stead and then the herder (household head or a group of young herder) migrate with other livestock. However, they return to their homestead otherwise they migrated with all family and livestock if the condition become worsen. From survey result, only about 12% of the respondents were used migration as the last option. However, most *the respondent households have clearly articulated that migration is an option only when their environment is bare to live on otherwise it is a perilous game.*

3.4.3.2. Social assistant

Social assistant is a deep-rooted ethos along with history of Borana society. In southern Ethiopia, clan support such as *buusaa gonofaa* (food and other resources sharing) and *Ameessa* (milking cow loan) are the most common social assistant during severe drought. It is a social assistance in which the rich or households whom livestock have survived from drought helps the households who has no and/or loss the whole livestock (Dirriba and Jema, 2015).

Besides clan assistant, food aid was also a common support received during drought. From the survey result, about 15% of the respondents were admitted to external emergency aid during drought season. However, even the emergency aid was not on time but after the societies failed in abject deficiency. Moreover, the external assistant such emergency food aid is not the issues to depend on due to its meagerness, inadequacy, and unintegrated coverage. The emergency food aid is normally starts from the bottom, neediest households, due inadequate potential of food aid sources. Interestingly, Borana society have a best culture that they share amongst neighbors what they have received from external even the food aid. During field survey, it was observed that the meager received food aid definitely shared among the neighbor with food scarcity.

3.4.3.3. Farming

Recurrent drought was imposed an important foundation to pursue assets and incomes diversification as an opportunity to farming in responses to climate changes at the expenses of rangelands. From the survey result, about 11% of the respondents were practicing the crop production though it is susceptible to moisture stress. Exclusively, farming is practically the post-drought option to insure their immediate family consumption. Moreover, the key informant interview indicated that farming practices was expanded in Borana zone.

Beyond consumption focus, crop production become an important business oriented practices. Especially, some elite practicing teff production, the cash crops in lowland, more intensively than other crops for market purposes. However, the problem is that pastoralists were selling their crops, majorly teff and alternatingly haricot bean, immediately after harvest where price very low owing to high supply. However, crop production is more sensitive to water stress than livestock during severe drought. Unless, intensive research would undertake, however, the loss was severing during moisture stress.

3.4.3.4. Non-farm-non-pastoral practices

Non-farm-non-pastoral incomes are among the major sources of income during drought breakout. Among the major, migration of family for labor work and other off-farm activities such as selling of firewood, selling of charcoal, labor work and working/keeping another's farm/livestock on payment basis, petty trade and handcraft were common. Especially, petty trades such as rural small shop, local beverage (Daadhii[1]), idustralized beverage (uozo) and kchat selling become common petty trades (Dirriba and Jema, 2015). From survey result, about 48% of the respondents were beheld that they were garnered income from non-farm-non-pastoral activities. Specially, those households around asphalt road were practicing charcoal and firewood selling as a common income option. Even beyond drought coping, still the practices of firewood and charcoal selling is consistently continued after drought.

Though firewood and charcoal extraction has a devastating effect on forest development, in Borana, it can be a best bush management technique. Bush is another bottle neck to rangeland where unimportant trees are intensively invaded the rangeland. However, a technical based teaching of the society on the exploitation is a prerequisite.

3.4.3.5. Saving and Borrowing

Livestock was the most common saving mode in pastoral area of Borana zone. However, drought has imposed a higher devastating effect from time to time. As a result, pastoralists were starting saving their financial assert in nearby financial organization. However, from this study only about 9% of the respondents were able to save their coins in different organizations such as Commercial bank, Cooperative, Microcredit institution, Others community based institution such as "Affooshaa2", "Waldaa3", women association and youth association among the major. From these saving groups, about 60.3% were able to save in banks and micro-finance institute whereas about 14% of the saver were saving in their own cooperative/union. Typically, the awareness to use formal financial institution is very low regardless of distance to these institutions where the respondents even revealed that they have no confidence to save their resource in financial institutions.

Borrowing is, on the other hand, a deep rooted common strategy in pastoral area of Borana to access finances for short period of time for different purposes such as food purchase, cultural affairs and other social duties. During the post drought field survey, however, only about 15.8% of the respondents were with debt after drought that indicate long term borrowing is very low.

3.4.3.6. Destocking

Destocking is an emergent act of reducing the herd size from their flock mostly as a coping mechanism during severe drought (Hurst *et al*., 2012). The main target of destocking is to reduce livestock death, to moderate the feed competition during severe drought and to covert livestock in kind to a liquid form. However, the key informants observed destocking as the last option attributable to a probability of survival of livestock from

[1] ***Daadhii:*** is a local beverage, which called *tej* in Amharic and *Dhaadhii* locablly in *Afaan Oromoo*.
[2] ***Afosha*** is an informal saving institution that a group of individual contributed a fixed amount of money on monthly basis mainly for some faithful (e.g. wedding) or unfaithful (e.g. death) day's financial requirements.
[3] ***Waldaa*** is an organized business oriented group of people with a common target to achieve a certain goal with a contribution of a fixed amount of money at a fixed interval of time.

drought. The key informant also indicated that though pastoralists were favor this option than complete loss, they fear the capacity to purchase livestock after drought owing to inflation.

Principally, the pre- and post-drought price of livestock is extremely imbalanced. As coping option, about 20% of the respondents were destocking their livestock before the sever effect of drought for purchase of food, livestock feed and other social cost beyond reducing livestock size. However, it is hardly possible to obtain the pastoralists that were destocking their livestock to save in notes. Typically, pastoralists were practicing destocking merely for emergency financial requirement, not to save.

4. Conclusion and recommendation

The recurrent drought has posed heavy losses on livestock resource, water resources, and grazing lands and as well as on the socioeconomic of the pastoral and agro-pastoral communities. Drought is continually become the big challenges in southern Ethiopia. Though the pastoralists were struggling either to overcome or reduce the effect of drought, it has been weakening their capacity to withstand afar their strategies. Unless otherwise the agricultural policy pay attention to the pastoralism, the major sources of livestock lives export, it would be a big loss even for the country's foreign currency income. Thus, the agricultural policy should pay attention to the grass root problems in dryland for further conducive policy emphasis.

Generally, in spite of modernizing the ways of pastoralism, they are struggling with the effects of climate change to survive over a period of time. Hence, it need a grass root intervention, both research and development, to improve the pastoral role in the national economic development beyond their current economic prestige in general. Definitely, climate change is not the sole problems that leaks pastoral society to the devastating effect of drought, but it is the result of multi-effects of different problem such as natural, social, political and cultural deterioration. Thus, this paper will provide the following specific recommendation for further due attention.

Thus, agricultural marketing system need a prime due attention. Particularly the value (demand) of livestock fluctuates in contrary to pastoral supply. Beyond livestock size, establishing strong livestock market linkage for better bargaining opportunity is the best opportunity to sustain the foreign currency generation from livestock. Still beyond the distance to the market, access to encouraging marketing system is challenging. With the current livestock marketing system, the exposure to drought consequence remains a challenge even to the country as whole unless far-reaching interferences could undertake. Thus, it need a steady binding efforts to establish regulated actors' linkage, price, livestock supply, supply chain, numbers of actors, livestock demand, and marketing system in general before campaigning the significance of destocking and restocking for drought.

Moreover, though some pastoralists were practicing crop farming in moderate manner, they were selling immediately after harvest in most case and less than a year in rare case. Why they cannot store for evil day of drought for better food security? During harvest the price of crop is very low relative to crop price during drought season. Moreover, during drought the tradeoff of crop-to-livestock is much higher than normal season. So, it need further study to identify the enigmatic encounters behind it.

Development of compulsory resources, feed and water, with sustainable exploitation need a primal devotion. The community migrating during drought for search of water and livestock feed altogether which even cause ethnic conflicts. Though development of ground water is somewhat inflated, well designed comprehensive rain water harvesting can save the risks of drought altogether with feed development along well designed watershed practices. Moreover, most of the rangeland was bush encroached and degraded which suppress the potential for feed development. Thus, irreversible bush clearing and/or thinning with efficient rangeland restoration techniques will recovers the shortage of feed resources. Furthermore, improving livestock feeding system need an equivalent attention to improve the sustainable uses of water and forage development.

Access to sophisticated early warning information (EWI) also need an important concern. The time gap of access to early warning information and drought breakout could not provide ample time to prepare to handle the effect of drought. Moreover, strong linkage of the pastoralists with EWI is a crucial that demands establishment of EWI center in the dryland area. This could provide an opportunity for the society to access updated prompt information that provide sufficient time to prepare for combatting the disastrous effects of drought.

Furthermore, awareness creation and training need intensive efforts. Drought is not a new phenomenon in southern Ethiopia which is known even before several decades. However, the effects and frequency of drought is increasing overtime whereas pastoralists are using similar possible coping strategies. As a result, the effect of drought is deadly eroding their main asset, livestock, from time to time with increased frequency and intensity. Thus, unless otherwise intensive awareness creation and tailored training on the way out will primed, the future of pastoralists will more suffering for the risks of climate change. Moreover, the livestock management scheme of the pastoralists is more or less as similar as past decades that ought to be allied with climate change. Thus, pastoralists need the strategies of the ways to go.

Agricultural policy is an important inspiring tool to enhance unalterable sustainable transformation in

pastoral society. Societies are struggling by their own indigenous knowledge to overcome the recurrent effects of drought. However, it need proved strategic plan that enhance the livelihood of the pastoralists to withstand the devastating effects of drought. Especially, livelihood diversification need a strategic thinking beyond pastoral practices. Depends on their indigenous knowledge societies are practiced such as farming and charcoal making to improve their income for better food security. However, unless otherwise the livelihood diversification is based on strategic policy evidence, it further increases the exposure rate of the society. Particularly, expansion of farmland is at the cost of rangeland that disturbs rangeland development, limit mobility and enhance soil erosion. So, it need urgent and intensive efforts of the policy interventions.

Improving access to infrastructure and services will moderate the dramatic change in pastoral society. The livelihood of pastoralists is highly dependent on agriculture, particularly livestock, with high market correlation. Thus, access to various infrastructure can affects the livelihood of the pastoralists either directly or indirectly. Specifically, access to all season road, adequate veterinary services, market place, adequate market information, prompt EWI and tailored made training are crucial to sustain the pastoral improvement to surmount the effects of drought and other climatic challenge.

Furthermore, building the future of the society, need a priority program attention. Specially, most of the external assistant such as food aid should shift their operation from emergency assistant fixated to the build of the future resources of the society. During drought, huge of resources were invested but focused on merely emergency assistant. However, it is the important if the emergency fund raised before the drought breakout to building the resources of the pastoralists that enable them to withstand the effect of drought. Otherwise, if the intervention continues in the emergency operation, the future of the society in the dryland of southern Ethiopia is questionable. Thus, the emergency fund raising should consider the future livelihood of a society besides the emergency aid.

Generally, it is hardly imaginable to stop the drought and its frequency. However, it is easier to developing a way out. Thus, to veil the pastorals society from the deadly effect of recurrent drought, it need the hand of multitude stakeholders including pastoral society itself. Furthermore, beyond development intervention identifying and prioritizing of the key challenges need a prior action. Finally, drought effects can be minimized if accountable stakeholder act together and consecutively to sustain the best interventions.

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