

THE IMPACT OF DROUGHT ON LIVESTOCK IN AFGOI, LOWER SHABELLE – SOMALIA

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ABSTARCT

Drought is generally an extended period of months or years in which precipitation is less than the annual average and results in severe water scarcity. For the Horn of Africa region, drought occurrence has become increasingly severe during the last decade, with rainfall totals of at least 50–75 % below normal encountered in most areas, amounts that are not sufficient to support crop and pasture growth for livelihood security (Nicholson 2014). The **main objective of this study** was to evaluate and measure the impacts of the drought on stock market, milk, fodder, and meat productivity, along with the major effects on the pastoralist's daily life. **Methodology** adopted in this research was quantitative approach include questionnaire and data analysis procedure, this study was employ through explanatory research design. The purpose affecting the variables involves in this study and helped to achieve all the objectives of research. The **study was conducted** from the livestock sales and pastoralists, afgoye district livestock market. The researcher had selected 80 respondent(s) randomly from the population. The data analyzed was performed using statistical package for social sciences (SPSS) version 16. **Result**, The study clarified the reason related to poverty caused by drought in various households 46.3%. As well as The study indicated that responders 56.3% was agreed to provided feed supplements for livestock during drought while 3.8% of responders not agreed. Also The study proven that the (55%) of responders said the Shortage of rainfall experienced towards the end of 2016 and early 2017 resulted in degradation of grazing veld, while (1.3%) of responders said not resulted in degradation of grazing veld. The survey results and field observations indicated that the afgoye livestock market was seriously affected by drought particularly in dry seasons. According to responder`s understand towards the period of drought time, the study indicated the majority of people lose their jobs, particularly in the livestock sector. The study recommended to all shepherds to establish an alternative project to store water and fodder to benefit from it during the long drought. , also the study recommended the government, NGO`s in dealing with disaster management in Somalia are currently focused on either

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emergency health preparedness or post emergency relief. There is need for them to shift their mindsets from reaction and charity to anticipation and preemption.

Key words: Drought, Livestock, Pastoralism, Afgoi, Lower Shabelle, Somalia.

Introduction:

Drought is generally an extended period of months or years in which precipitation is less than the annual average and results in severe water scarcity (Wilhite 2000; Downing and Bakker 2000; Whetherald and Manabe 2002).

For the Horn of Africa region, drought occurrence has become increasingly severe during the last decade, with rainfall totals of at least 50–75 % below normal encountered in most areas, amounts that are not sufficient to support crop and pasture growth for livelihood security (Nicholson 2014).

According to the World Meteorological Organization (Hounam et al. 1975), droughts are classified as either meteorological (lack of precipitation over a region for a period of time), hydrological (a period with inadequate surface and subsurface water resources), agricultural (a period with declining soil moisture and consequent crop failure due to lack of

surface water resources), or socioeconomic (failure of water resources systems to meet demands, which impacts human activities both directly and indirectly).

Livestock production is critically important in the IGAD (Intergovernmental Authority for Development) region. This region is part of the Greater Horn of Africa, which includes the countries of Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, Tanzania and Uganda. In the developing world, livestock production is rapidly changed in response to a variety of environments.

Globally, human population is expected to increase from around 6.5 billion today to 9.2 billion by 2050. From thus more than 1 billion of this incensement will occur in Africa. Rapid urbanization is expected to continue in developing countries and the global demand for livestock products will continue to increase significantly in the coming decades (Delgado et al., 1999).

Livestock marketing, understood as the process through which live animals change ownership, is increasingly perceived as critical for improving pastoral household income. However, there is relatively little analysis of the structure and performance of livestock marketing systems, or of the various market actors involved. The increasingly vibrant regional cross-border livestock trade in particular is poorly understood (Little, 2009).

Problem statement

The global livestock sector sustains approximately 1.3 billion people, and about 40% of the global agricultural output is contributed by the livestock sector (Matthews, 2006). However, the major challenges linked with livestock farming are deterioration of pastures, low technological adoption rates as well as drought and animal diseases (Matsaert, Kariuki and Mude, 2011; Hill, Hoddinott and Kumar, 2013; Bishu, O'Reilly, Lahiff and Steiner, 2018).

Drought occurs when there is a persistent low amount of rainfall received relative to the mean rainfall in a specific area (Wilhite and Glantz, 1985). Reports show that 642

drought occurrences have happened between 1900-2013 worldwide (Masih, Maskey, Mussá and Trambauer, 2014). The drought occurrences have increased both in intensity and frequency over the recent past.

Effects of drought in Sub-Saharan Africa have increased over the years resulting in poor grazing lands, unavailability of water, and the death of animals (Muricho, Otieno, Oluoch-Kosura and Jirström, 2019). Drought deteriorates the livelihoods of the affected households by reducing both crop income and non-farm income (Fafchamps, Udry and Czukas, 1998). The reduction in the amount of rainfall in a region due to drought causes water scarcity which has direct implications on household food security.

Somalia is experiencing the negative impact of abnormally performing *Gu'* rains (April – June) which follow a poor 2018 *Deyr* season (Oct-Dec), and unusually dry conditions during the 2019 *Jilaal* season (Jan-Mar). Except the 2018 *Gu'*, every rainy season since late 2015 has been below average, leading to increased vulnerability and decreased coping ability. The 2019 *Gu'* is the second consecutive below average

rainy season, in a country still recovering from the prolonged drought in 2016-17.

Purpose of study

This study is intended to assess the current problem of drought and its impact on the livestock market in Afgoye district specifically, lower Shabelle – Somali, and project the implication based on current and future scenario.

General objectives

The main objective of this study will be to evaluate and measure the impacts of the drought on stock market, milk, fodder, and meat productivity, along with the major effects on the pastoralist's daily life.

Specific objectives

1. To evaluate the health conditions of the animals e.g. weight loss and pregnancy rate in term of the drought months.
1. To assess the rate of Milk, fodder and meat productivity in term of drought months.
2. To measure the effect of drought months on pastoralists livelihood both socially and economically.
3. To raise the awareness of pastoralists on drought problems and its direct impact on their livelihood.

RESEARCH DESIGN

This study will employ through explanatory research design. The purpose affecting the variables involves in this study and helped

to achieve all the objectives of research. However, this study is used quantitative approach; Quantitative is any data collection technique (such as a questionnaire) or data analysis procedure (such as graphs or statistics) that generates or uses numerical data. In addition the method used acquire the data in this study is survey method. Survey method is a designed to collect primary or secondary data from a sample, with a view to generalizing the results to a population. (Collis & Hussey, 2003).

3.2 Population of the study

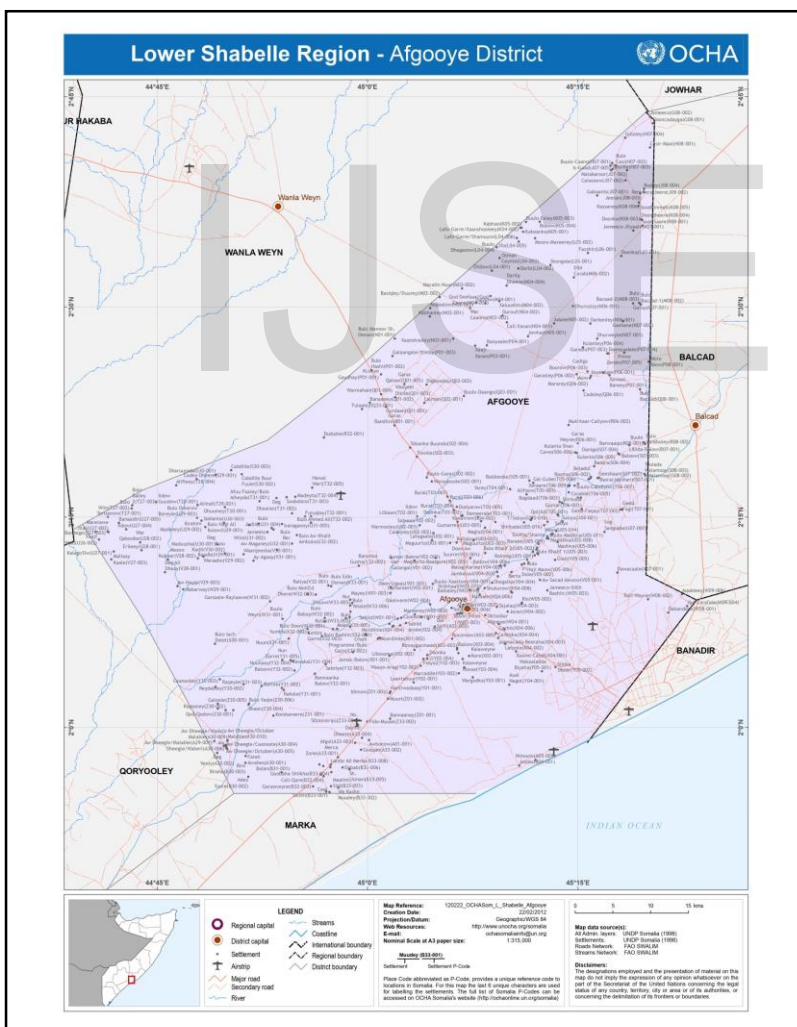
The study will be conducted from the livestock sales and pastoralists, afgoye district livestock market. The researcher will select 80 respondent(s) randomly from the population.

Study area

Lower Shabelle is one of the most fertile areas in Somalia, and food production is the predominant means of making a living. Agriculture can be roughly divided into large estates and self-sufficient smallholdings. The agricultural area follows the Shabelle River.

Like the rest of Somalia, the climate in Lower Shabelle is hot and dries all year. The annual average temperature is between 26 and 28 degrees Celsius (Muchiri 2007, p. 28). The average temperature difference between the hottest months (from December to March) and the coolest months (July and August) is only a few degrees, but it is somewhat greater in the inland areas than along the coast. In August, the temperature can drop to 16 degrees Celsius (Luling 2002, p. 13).

Afgoye is a town in the southwestern Somalia lower shabelle region of Somalia. It is the center of the afgoye district. Afgoye is the third largest city of southwest state, and one of the oldest towns on the lower Shabelle valley, 30 kilometers north of Mogadishu. Afgoye is the site of lafoole college, the first college of education in Somalia, built on the site of the battle of lafoole of 1896. The most important travel hub in Lower Shabelle is the town of Afgoye, which is situated around 30 km from mogadishu.



MAJOR FINDINGS & CONCLUSION

The survey results and field observations indicated that the afgoye livestock market was seriously affected by drought particularly in dry seasons.

According to responders of education level, the study illustrated that the majority of respondents were never attended school and studied primary school.

The study proven that the majority of respondents were self-employed, according to the distribution of respondents by occupation.

According to pastoralists whenever there is a drought majority of them relocate their animals to less distress farms.

The study demonstrated that the majority of responders which carry out this study have a high rate of animal mortality. The study showed that the majority of respondents said drought has the potential to cause poverty in a variety of homes.

According to responder`s understand towards the period of drought time, the study indicated the majority of people lose their jobs, particularly in the livestock sector.

According to the study which clarifies that it is critical to supply feed supplements for

animals to avoid revenue loss during a drought. The study proven that the majority of respondents were facing the lack of rain at the end of 2016 and the beginning of 2017 led in grazing veld deterioration.

RECOMMENDATIONS

The following are recommendations for future planning and implementation:

- The study recommends the shepherds to establish an alternative project to store water and fodder to benefit from it during the long drought.
- The study recommends to aware pastoralist and farmers about the importance of protecting the environment from degradation.
- The government, NGO`s in dealing with disaster management in Somalia are currently focused on either emergency health preparedness or post emergency relief. There is need for them to shift their mindsets from reaction and charity to anticipation and preemption.
- It is recommended to the Somalia federal government to find a sustainable solution to the water crisis, due to the scarcity or lack of water of the Shabelle River, which originates in neighboring countries such as Ethiopia.

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ILLUSTRATIVE WORK APPENDIX



SHABELLE RIVER – AFGOYE DISTRICT
DROUGHT PERIOD 2016



LIVESTOCK MARKET – AFGOYE DISTRICT



AFGOYE DISTRICT – DROUGHT PERIOD 2017



AFGOYE DISTRICT – DROUGHT PERIOD 2017