

## The Effects Of Drought On Livestock Production In Jawhar District Somalia

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### Abstract

In this study, the Researcher was critically examining effects of drought on livestock production in Jawhar District Somalia. Droughts are the classic slow-onset disaster. They develop slowly, they tend to last a long time, and they cover a wide geographic area.. Drought affects all parts of our environment and our communities. The many different drought impacts are often grouped as “economic,” “environmental,” and “social” impacts. All of these impacts must be considered in planning for and responding to drought conditions. The researchers used survey design in gathering primary data using questionnaire as a research instrument. The targeted a population of the study was contain 11,000 households, 3,800 humanitarian staff, 6.000 local communities and 1,200 other population of Jawhar District Somalia. The sample size was 386 respondents (using solven’s formula). Descriptive statistics was used for analyzing the data by using SPSS software. The study states that, droughts often have economical, environmental, and social impacts because the result shows that the most respondents 35.6% of respondents were strongly agree., also according to the study, the result shows that managing droughts in Jowhar needs appropriate management practices because out of 20.7% of respondents were strongly agree and (25.9%) was agreed. In order to reduce the impact of droughts in Jawhar district Somalia, the researcher recommended, The community should receive information about the impact of drought in Jowhar on a regular basis and In times of drought temporary migration from rural areas becomes especially important.

## INTRODUCTION

Droughts are the classic slow-onset disaster. They develop slowly, they tend to last a long time, and they cover a wide geographic area. Unlike earthquakes or cyclones, where the date (and even the exact time) of the hazard can be identified, droughts do not become disasters until time has passed. Because they develop slowly, it is difficult to determine exactly when the drought begins and ends.

A drought is defined as “a period of abnormally dry weather sufficiently prolonged for the lack of water to cause serious hydrologic imbalance in the affected area.”<sup>333</sup> But there is a lack of a standard quantitative definition of drought – how far from normal patterns does rainfall have to decline in order for a shortfall in precipitation to be a drought? Ten percent below normal over six months in time? 50 percent below normal over a year? In fact, given the prevalence of and destruction caused by drought, it is surprising that there isn’t more clarity or statistical analyses of droughts. While other hazards have their own databases (e.g. the Dartmouth Flood Observatory collects data on floods; earthquakes are studied and monitored by the US Geological Survey), there is no specific database on droughts.

### The Effects of Drought

Drought affects all parts of our environment and our communities. The many different drought impacts are often grouped as “economic,” “environmental,” and “social” impacts. All of these impacts must be considered in planning for and responding to drought conditions.

Droughts kill more people than any other type of disaster. Below et al. reviewed drought disasters from 1900-2004, finding that more than half of the 22 million deaths associated with natural hazards were due to drought. And yet droughts accounted for only 35 percent of the 5.4 billion people affected by natural disasters. In comparison, floods affected far more people, accounting for 50 percent of those affected by natural disasters. In other words, droughts kill proportionally more people, while floods affect a higher number of people than droughts – at least according to prevailing methodologies used to measure those impacted by drought.<sup>335</sup> Surprisingly, they also found that only seven percent of the estimated \$1.2 trillion in economic losses from disasters occurring between 1900 and 2004 were due to droughts while floods, earthquakes and wind storms each accounted for approximately 30 percent. Why are there such low economic losses for drought? It may well be that indirect losses are simply not captured as well as direct physical damage incurred by other types of disasters. While droughts destroy crops and livelihoods, they rarely damage built structures or infrastructure. Moreover, the 2011 drought in the US southwest notwithstanding, droughts tend to affect poor nations more so than wealthy ones, where data collection is generally less comprehensive.

In comparison with other disasters, droughts tend to affect spatially larger land areas. While droughts can and do occur in any region of the world, they are more likely to occur in arid areas, known as dry lands. Given the fact that dry lands cover about 41 percent of the global landmass, comprise 44 percent of the world’s cultivated

lands, and are home to a third of the world's population or two billion people, the potential for drought to have catastrophic consequences is significant.

### **The Impacts of Drought on Livestock Production**

In the last two decades the crop and livestock production contributed the exports of Somalia, According to Dr. Solomon Munyua et al(2009) studies show the Somalia's economy, one of the poorest in the world, is an agricultural one based primarily on livestock and, to a lesser extent, on farming.

Somalia has a traditional livestock sector based on nomadic pastoralism and a growing private sector led export industry (partly as a result of the disappearance of the central government).

Since the beginning of the civil war in the early 1990's, levels of food production have generally been low. Adverse weather and a lack of seeds for cultivation, compounded by insecurity and population displacement, has further hampered farming in south central Somalia. Successive crop failures have also denied farmers any surplus production for the purposes of seeds. A lack of pest control and other agricultural extension programmers' has resulted in the proliferation of crop destroyers, notably armyworms, stalk-borers and birds.

### **Strategies of Drought Management**

**Selling feeder animals early** – depending on your calving season and the year selling weaned calves early than normal could be more profitable. Another alternative might be to wean early and buy feed for the calves; this

The majority of agriculture in the region takes the form of subsistence grain production, providing the bulk of household income in the inter-revering communities, especially along the Shabelle and Juba Rivers

Droughts have significant and long lasting effects on the agricultural sector of South Africa. Food security is one of the most important concerns resulting from drought as much of the hunger of the world is related to highly variable rainfall, especially in rural areas (UNDP-BCPR, 2005). Maize, for example, is highly sensitive to variations in rainfall as an extended dry period can result in lower grain formation and a decreased maize yield (Clay *et al.*, 2003). There are also a range of other outcomes that can be triggered.

The most immediate consequence of drought is a fall in crop production, due to inadequate and poorly distributed rainfall. Farmers are faced with harvests that are too small to both feed their families and fulfill their other commitments. Livestock sales act as a buffer in times of hardship, farmers disinvesting in these assets to buy food. The first animals to be sold are usually those which make the least contribution to farm production, such as sheep and goats.

of course is dependent on the cost of feed the value of the calves and other available resources.

Sharing of animals between households may be possible where overall losses have been slight. Such animal loans are common in many farming systems in normal years,

the loan of a plough team often being repaid with so many days of weeding labor

For Somalian agriculture to survive the adverse effects of drought, the government needs to be deliberate in their financial planning regarding support and the investment towards the sector in terms of mitigation strategies as

### METHODOLOGY

This study was conducted through survey design.

Survey design is a design in which data were collected with questionnaires or through scales, with members of an identified Population. According to (quinlan, 2011), Survey was a research methodology tool that was used in facilitating a study of big populations and geographically scattered samples. It was quantitatively in nature. It was usually used with questionnaires and scales.

The research project was designed to identify The Effects of Drought on Livestock Production in Jawhar

well as coping mechanisms, especially for the developing farmers who have everything to lose with just one season of drought.

Policy makers should assess the capacity of crop and livestock production systems to rehabilitate themselves in the absence of outside intervention for two reasons.

District – Somalia. This design was selected for this study because the population of the study is too big

The study was conducted in Jowhar the total number populations are 11,000 households (according to UN Office for the Coordination of Humanitarian Affairs In Nov 2013) therefore the respondents including for Local humanitarian staff, Jowhar district municipality and same population.

The sample size of this study consisted of 386 respondents whom are selected from the population of the study who are 11,000 respondents, this is obtained using solven’s formula

**Table of Sample size of the study**

Categories	Population	Sample Size
Humanitarian staff	3,800	128
Local communities	6,000	145
Others	1,200	113

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Total Population

**11,000**

**386**

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The sampling technique that the researcher use was be purposive sampling, which is a non-probability sampling technique. In non-probability sampling, not all members of the population have an equal chance of being enlisted onto the sample. According to (Quinlan, 2011) purposive sampling technique is a technique that the researcher decides or makes a judgment, about who to include in the research.

The study used questionnaire adapted from Lewis (2009) as the main tool for collecting data.

Questionnaire is “a technique of data collection in which each person is asked to respond to the same set of questions in a predetermined order”.

After approved the proposal the researcher requested student affairs office a letter that informing the researcher is investigating academic research, after receiving an introductory letter from the office the researchers will request member of population to fill questionnaire with unbiased and honestly. Finally the researcher distribute questionnaire to staff of schools then, researcher

analyzed data by using statistical package for social science, (SPSS Version 25.0).

The researcher encountered some problems in this research work. Among problems are the time which may become barrier for collecting the data. The mature problem is low resources of the study since there is lesser studies made before, this can challenge retrieving the earlier researchers what they obtained during their research activities.

## **RESULT**

Case study research design was used, employing both primary and secondary techniques of data collection during the study in order to answer the research question. Firstly, with regard to the first research question “the effects of drought in Jawhar District – Somalia”, the study states that, droughts often have economical, environmental, and social impacts because the result shows that the most respondents 35.6% of respondents were strongly agree., also according to the study, the drought may increase the disease in wild animals, because of

reduced food and water supplies (37.6% the most of the respondents was strongly agreed, and 23.3% was agreed, we can add that the droughts kill more people than any other type of disaster (the result shows that the most respondents out of 21.5% of respondents was strongly agree and (33.0%) was agreed.

The study in the second research question wanted to know, the impacts of drought on Livestock Production in Jawhar District – Somalia, The study showed that Droughts reduce agricultural production in Jowhar district because 36.6% the most of the respondents was strongly agreed, and 26.4% was agree, also the study showed that “low rainfall causes poor pasture growth and may also lead to a decline in fodder supplies from crop residues.” 32.1% of the respondents was strongly agreed, 34.2% was agree, so that shows Low rainfall causes poor pasture growth and when the researcher asked the respondents “Livestock farmers suffer losses of their animals due to unavailability of enough water.”, the most respondents 33.0% was agreed, so that shows that Livestock farmers suffer losses of their animals due

to unavailability of enough water and according to the study, the result shows that managing droughts in Jowhar needs appropriate management practices because out of 20.7% of respondents were strongly agree and (25.9%) was agreed.

With respect to the third research question Strategies of Drought Management in Jawhar District – Somalia, the findings show that the community should receive information about the impact of drought in Jowhar on a regular basis because 55.4% of the respondents was strongly agree, also as the study above shows, the researcher asked the respondents “Policy makers should assess the capacity of crop and livestock production systems” 38.3% of the respondents was strongly agree, 28.4% was agree, however this means that the most of the respondents said “Policy makers should assess the capacity of crop and livestock production systems”, even when the researcher asked the respondents “In times of drought temporary migration from rural areas becomes especially important” 35.2% of the respondents was strongly agree, 22.3% was agree, however this means in times of drought temporary migration

from rural areas becomes especially important.

### CONCLUSION

According to the study the result shows that droughts often have economical, environmental and social impacts and also lack of water and pasture led to high livestock deaths and low birth rates, and induced distress selling.

Also the study shows that the drought reduce agricultural production in Jowhar district and the effects of drought trickle down to consumers, as the increased cost of food will affect their pockets

According to the study to reduce the impact of droughts, temporary migration from rural areas becomes especially important and also the government should raise awareness about drought and the impacts there of and train producers on innovative ways to recycle water.

### RECOMMENDATIONS

In order to reduce the impact of droughts in Jawhar district Somalia, the researcher recommended:

The community should receive information about the impact of drought in Jowhar on a regular basis

In times of drought temporary migration from rural areas becomes especially important

More investment into research that will identify drought resistant cultivars as well livestock breeds that will assist producers to reduce the effects of drought.

It is important that the findings of this research are not generalized to all districts in the country. The sample for this study though fairly large was from only one the districts in the middle shabelle region Somali (Jawhar)

Further research can be conducted with larger sample size from other districts situated in different area throughout the regions of the country.

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