

# **INFLUENCE OF HUMAN RESOURCE AND FINANCIAL FACTORS ON IMPLEMENTATION OF DROUGHT MANAGEMENT STRATEGIES IN KENYA**

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## **Abstract**

Drought is a complex, pervasive natural hazard. Reducing the impacts will require a more strategic approach to drought planning. Such plans will need to emphasize on the effectiveness of drought management strategies in reducing drought. For successful implementation of the strategies in organizations, the employees must be equipped with the required skills, knowledge, tact and abilities throughout continuous training and in-service courses. However, the human capital development as a drought mitigation strategy has not received sufficient research attention despite it being variable over different contexts. Therefore, the objective of this study was to examine the influence of human capital development on the implementation of drought management strategies in Taita Taveta County, Kenya by the National Drought Management Authority (NDMA). The study was guided by the Human Capital Development theory. A total of 64 respondents participated in the study. Data collected were analyzed using descriptive analysis methods. The study found that human capital development significantly influenced the implementation of drought management strategies. However, there were gaps in human resourcing that needed to be filled through professional initiatives other than formal training. The study, therefore, recommended that the NDMA should further emphasize continuous training of employees and also apply other professional initiative apart from formal training so as to implement drought management strategies in the area. Finally, the study was also able to demonstrate the first aspect of the human capital theory by underscoring the importance of human capital development through training for skill acquisition.

**Keywords:** Human capital, Development, Drought management, Strategies, Implementation

## **1.0 Introduction**

Drought is a complex, pervasive natural hazard. Droughts occur at multiple spatial scales and evolve over timescales that make them distinctive compared to other ‘natural’ hazards. Whilst the occurrence of droughts is driven significantly by meteorological and (surface and groundwater) hydrological conditions, impacts of water scarcity are profoundly influenced by human choices and trade-offs between competing claims for water. Those choices are, in turn, shaped by the societal and institutional contexts in which they are embedded (Sayers, Galloway, Penning-Rowsell, Yuanyuan, Fuxin, Yiwei & Guan, 2014). Its complexity has led to multiple definitions of ‘drought’ reflecting the varying climatic characteristics from one region to the other and the sector-specific impacts it has. On all measures, drought impacts appear to be increasing in both developing and developed countries and will increasingly put a break on development and lead to irreversible environmental damage (UNEP, 2013). Future droughts will happen. Reducing the impacts will require a more strategic approach to drought planning (at a policy and more local level). Such plans will need to emphasize on the effectiveness of drought management strategies in reducing drought (Mitchell & Wilkinson, 2012).

Globally, China has been seen as a giant in setting out suitable climate for drought management strategies. According to Kellett and Peters (2013), the Chinese government has committed significant resources to addressing water resource management to avert and limit the frequency of droughts and their effects to its ever increasing population that is often associated with very significant social, economic and environmental consequences. In Africa’s Ethiopia for example, the national government has been partnering with a number of NGOs, CBOs, FBOs and many more since the severe drought that was experienced in 1984. The partnerships have been said to be among the strategies that have been adopted to reduce the severity and effects of the drought and dearth in the country. However, the strategies have been found to be failing and performing poorly from time to time due to factors like: poor organizational/institutional structures, shortage of qualified leaders and experts, irrelevant programmes and policies adoption, poor funding of the process, poor understanding of the risks, poor political goodwill and poor climate management technology (WFP, 2013).

In Kenya, drought has been a major, dominant and frequent hazard affecting the country’s population, more specifically in arid and semi-arid lands (ASALs) (GOK, 2012). Hazards such as drought and floods were experienced in the country in 2000, 2005, 2006, 2009 and 2011, but the drought hazard has a significant effect that needs to be controlled and mitigated. This needs well defined policies, rules, regulations, strategies and many more (UNDP, 2012). UNEP (2011) adds that drought is the prime recurrent natural disaster in Kenya that affects the 10 million people, mostly livestock dependent people in the Arid and Semi-Arid Lands districts. This has called for a number of interventions/strategies across the frequently drought affected areas that include: water trucking, boreholes, other water activities, destocking slaughter, destocking commercial, animal health, animal feed and peace building. However, studies have indicated that, the success of these strategies has tied itself to a number of factors across the country that include: politics, financial resources, timing of responses, expertise information, technology used, and availability of qualified manpower have been issues all round (WFP, 2015). Climate proofed infrastructure is also emerging as

an important drought mitigation strategy, however, one that has not received considerable research attention.

According to Schultz (1993) cited by Maran (2012), human capital has been defined as a key element in improving an organization / firm assets and employees in order to increase productive as well as sustain competitive advantage. To sustain competitiveness in the organization human capital becomes an instrument used to increase productivity. Human capitals refer to processes that relate to training, education and other professional initiatives in order to increase the levels of knowledge, skills, abilities, values, and social assets of an employee which will lead to the employee's satisfaction and performance, and eventually on a firm performance. A study by Organization for Economic Co-operation and Development (OECD) (2013) shows that, human capital is an important input for organizations especially for employees' continuous improvement mainly on knowledge, skills, and abilities. Thus, the definition of human capital is referred to as "the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being" (OECD, 2013).

A study by Kenya Food Security Steering Group (KFSSG) (2013) indicates that, the role of human resource development is indeed a factor that influences the implementation of the drought management strategies just like in any other organization. Rastogi (2012) argues that, for successful implementation of the strategies in organizations, the employees must be equipped with the required skills, knowledge, tact and abilities throughout continuous training and in-service courses. Also, the employees must be trained on how to include the communities and how they can use the local models to see success in the implementation of various strategies. According to David (2003), that it is not possible to implement strategies which demand more financial resources than the organization can avail. Denti and Hemlin (2012) argue that strategy implementation always consumes organization's financial and human resources. Too little resources will tend to stifle the ability of the company to carry out the strategic plan. William (2012) explains that for the drought management strategies to be effectively implemented, there needs to be well spelt sources of finances, sufficient financial resources and well streaming financial resources. However, this aspect had not been examined in depth at the organizational level such as in the NDMA in Taita Taveta County.

According to WFP (2014), the history of Kenya's work on drought management goes back to 1985, with the design of a drought contingency planning system (strategy paths) in Turkana. In the early 1990s this system was extended to other arid and semi-arid districts like Taita with the support of the Netherlands government. It was then expanded further by the Emergency Drought Recovery Project (from 1992) and its successor, the ALRMP, both of them supported by the World Bank. By end of Phase II of the ALRMP, the drought management system was covering 28 arid and semi-arid districts (now 23 counties). GOK (2016) notes that, this series of short-term, project-based interventions were being carried out at a time when drought periods were becoming increasingly frequent and intense, directly affecting the household food security and livelihoods of more than ten million people with 1.8 million coming from the various counties of the former coast province. The government, therefore, recognized the need to strengthen the sustainability and quality of drought management in Kenya by establishing the National Drought Management Authority

(NDMA). The NDMA provides a platform for long-term planning and action, as well as a mechanism for solid coordination across Government and with all other stakeholders.

The National Drought Management System (NDMS), a dedicated disaster risk management system addressing drought in Kenya, was established almost twenty-five years ago. The NDMA was seen as a risk management system that could help mitigate the frequency of effects of the drought in Kenya. Republic of Kenya (2014) indicates that, the National Drought Management Authority (NDMA) is a public body established by the National Drought Management Authority (NDMA) Act, 2016. It previously operated under the State Corporations Act (Cap 446) of the Laws of Kenya by Legal Notice Number 171 of November 24, 2011. The Act gives the NDMA the mandate to exercise overall coordination over all matters relating to drought management including formulation of drought management strategies, policies, implementation of policies and programmes relating to drought management. The Authority has established offices in 23 ASAL counties considered vulnerable to drought where, Taita Taveta County is top 7 in the list and the activities of the body being unified to the Ministry of Agriculture and Natural Resources Management of Taita Taveta County.

The Kenya Post-Disaster Needs Assessment (KPDNA) report for 2008 – 2011 indicates that drought is one of the biggest threats to achievement of Kenya Vision 2030 (KPDNA, 2011). If left unchecked, it can cause substantial damage and losses to the health and wellbeing of people and to the stability and growth of the nation. Drought management strategies have been implemented to ending drought emergencies, however, unavailability of financial resources, inadequate human capital capacity building, and tribal politics have impacted negatively in achieving this goal. Various studies have been done in drought management (Wilhite & Buchanan-Smith, 2005; Okoth, 2012; Musimba, 2014). A report by UNDP (2012) showed that droughts in Kenya have affected the communities that live in the arid and semi-arid lands and the communities have been engaged in various projects that are aimed at reducing their effects by either government bodies, Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs) and Faith Based Organizations (FBOs).

The study continued to show that a number of strategies have been developed by the Kenyan government since 1990s to address the drought in the ASALs but this has from time to time been affected by factors like policies, corruption, lack of financial resources, poor expertise involvement, poor communication, poor M&E and lack of proper planning. Rastogi (2012) argues that, for successful implementation of the strategies in organizations, the employees must be equipped with the required skills, knowledge, tact and abilities throughout continuous training and in-service courses. However, the human capital development as a drought mitigation strategy has not received sufficient research attention despite it being variable over different contexts. It is, therefore, important to investigate how a well-developed workforce can be instrumental in mitigating drought in these contexts. One such case is Taita Taveta County which is one of the marginal counties in Kenya which is vulnerable to drought and its effects. The aim of this study was, therefore;

- a) To examine the influence of financial resources on drought management strategies implementation in Kenya.

- b) To investigate the influence of human capital development on the implementation of drought management strategies in Kenya.

Human Capital Theory was developed by Becker (1994) to explain the need for proper human resource management in ensuring productivity of employees in an organization. According to the human capital theory, human capital is the stock of knowledge or personality attributes that explains for creativity and ability an employee has in performing the assigned tasks and creates economic or social value (Crook, Todd, Combs, Woehr & Ketchen, 2011). Human capital is closely associated with human resources of an organization, with an emphasis on human resource productivity and not the number. More specifically, the Human Capital Theory is concerned with the nature of the task in terms of the availability of the required skills, skills and expertise to perform such tasks. The skill-set is the basis for wage dynamics and promotion dynamics inside firms (Cohen & Soto, 2007).

Human capital theory states that the relevance of knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom by an employee in organization determines the productivity of such an employee. However, the theory asserts the greatest impact of human capital is conceptualized in four aspects (Olaniyan & Okemakinde, 2008). The first aspect is on the skill set of an individual. The second aspect is on collaborative aspects whereby the individual employee collaborates with other employees to produce output (Mahroum, 2007). The third aspect is on processes where emphasis is put on collaboration between individuals and activities of the organization structure. The fourth aspect is on absence that addresses the strategies that are used to ensure proper productivity in cases where some employees are absent due to annual leave, sick leave and holiday among other reasons (Keeley, 2007). All these aspects ensure that there is proficiency in the tasks undertaken by employees in an organization.

This theory has faced some criticism due to its assumption that salary remuneration and promotions among other bonuses are based on individual skill set or expertise. The critics argue that skill endowment may not necessarily translate to good performance by an employee. Intangibility of knowledge and social connection creates a challenge in measuring proficiency of skills in the work force of an organization. Hence, to develop drought management strategies, NDMA should determine its unique resources and capabilities. The theory was, thus, relevant in explaining the influence of human capital development on strategy implementation in the NMDA as human capital development is about knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom by an employee. The Human capital theory was used to guide the study in respect to the influence of human capital development on the implementation of drought management strategies in Kenya.

## **2.0 Resource Based Theory**

Resource-based theory states that the possession of resources is valuable, difficult to imitate, rare and cannot be substituted (Kozlenkova, et al. 2014). The resource-based theory suggests that organizations should look inwards to find the sources of competitive advantage through the use of their resources (Ambrosini, & Bowman, 2009). The determinants of competitive strategies implementation in organizations can be explained by the resource-based theory. The resource-based theory as a basis for the competitive advantage of a firm lies primarily in

the application of a bundle of valuable tangible or intangible resources at the firm's disposal (Ambrosini, & Bowman, 2009).

To transform a short-run competitive advantage into a sustained competitive advantage requires that these resources are heterogeneous in nature and not perfectly mobile (Ranganathan, Ghosh, & Rosenkopf, 2018). Effectively, this translates into valuable resources that are neither perfectly imitable nor substitutable without great effort. If these conditions hold, the bundle of resources can sustain the firm above average performance and success. According to GOK (2015), for strategy success in the management and control of droughts as proposed by various stakeholders in a number of taskforces formed, there are resources needed - human resources and finances - that are considered tangible and intangible resources. Therefore, for strategies to be successful in bodies like the NDMA there must be well designed resources like human resources, financial resources, technology and other intangible resources. Therefore, this study was also guided by the resource-based theory.

Different researchers have sought to establish how human capital development affects drought management strategies. In a 2013 report for instance, OECD (2013) studied the influence of human resource development in strategy implementation in G8 countries. The findings indicated that human resource development enables the employees to acquire skills, knowledge, abilities, values, and social assets that shall enable the employees to comprehend and understand how and when to implement the specific parts of the strategy. Similarly, World Vision (2012) did a study on the FAPs implementation as a strategy of persisting hunger threats in Makueni County. The study adopted a descriptive and qualitative research designs. The findings indicated that successful implementation of the strategy employees must be equipped with the required skills, knowledge, tact and abilities through continuous training and in-service courses. Therefore, the employees must be trained on how to include the communities and how they can use the buoyed skills to see success in the implementation of the strategy.

Tadesse (2016) conducted research on Drought Risk Management and Enhancing Resilience in Africa. The research was based on different sources of existing literature. The study established that Efficient and effective organizational structure and mechanism as well as human resources with rich experience, knowledge, and skills are vital for effective disaster risk management system. However, the current assessment in Africa indicates that these have not yet been fully achieved. Thus, African nations need to establish a drought risk management and resilience strategy framework that is more focused on the human dimensions of drought and proactive drought risk reduction measures. Such a strategic framework that considers the socioeconomic and gender asymmetries of drought impacts will help Africa to reduce the likelihood of losses of lives, the severity of economic losses, and also to identify and prioritize drought risk management instruments and mitigation activities.

The concept of financial resources in drought management can be defined as the money available to a drought management bodies for spending in the form of cash, liquid securities and credit lines. Before going into drought management, the drought management bodies need to secure sufficient financial resources in order to be able to operate efficiently and sufficiently well to promote success (National Drought Mitigation Center, 2013). According to Kerzner, and Kerzner, (2017) budgetary allocations demonstrate management commitment to the strategic plan. The projects and programmes provided for in the budget

should derive from the company's strategic plan. This is helpful especially in ensuring that activities of the company are carried out efficiently so as to reinforce the implementation of strategy.

The World Food Program (WFP) (2013) explains that, financial resources need to be well identified to fund various drought mitigation strategies like hiring qualified personnel for research, develop proper channels for information dissemination, compensate the affected communities, build reservoirs for water in the drought hit areas to harvest water during the short rain seasons, financial resources for supportive technology, financial resources for acquisition of the relevant animals and goods in the cash for asset programmes, finances to control pests and diseases that are closely associated with the movement of animals and people from one area to another in search of water and pasture among others.

Different studies have been conducted on financial resources and how they influence drought management strategies. World Food Programme (2008) conducted a study on The Safety Net Role of Food Aid in Kenya. The study established that sustainable sources of financial support, sufficient amount and continuous/timely flow of financial resources influence the implementation of food aid and drought management strategy implementation. A study by the World Bank (2014) indicates that financial resources are vital in providing alternative cash for assets to the communities living in ASALs in Kenya, money is required to employ field extension offices, other drought management experts, money is required to acquire modern technology, funds to develop and implement policies, money is required for M&E of the programmes and many more. Therefore, for effective implementation of the drought management strategy by the NDMA, it needs to identify the sources of its finances, the amounts allocated, the time of allocations and the frequency of allocations.

### **3.0 Materials and Methods**

This study adopted a descriptive survey research design. This design was preferred for this study because of its ability to capture attitudes that would be difficult to measure using observational techniques. The target population for this study consisted of employees of National Drought Management Authority in Taita Taveta County, some government line ministries, NGOs heads and community based organizations heads who deal with drought management totaling 165 respondents. The choice of this population was informed by the fact that they play an important role in decision making in their organizations and, hence, are involved in implementing strategies on drought management.

The population was divided into four strata: the four Sub Counties of Taita Taveta County to ensure representation in the entire county. A stratified sampling was used to determine the sample targeting National Drought Management Authority staff, government line ministries, NGOs heads and community based organizations heads. The sample size (n) was computed using Sudman formula as cited by Singh, and Masuku (2014).

$$n = \frac{\left( \frac{P[1-P]}{\frac{A^2}{Z^2} + \frac{P[1-P]}{N}} \right)}{R}$$

Where:

n = sample size required

N = the population

P = estimated variance in population, as a decimal: (0.5 for this study)

A = Precision desired, expressed as a decimal (0.05 for this study)

Z = Based on confidence level: 1.96 for 95% confidence,

R = Estimated Response rate, as a decimal 0.70

A sample size of 81 respondents resulted from the application of the formula.

Primary data were collected using copies of a researcher developed structured questionnaire. The questionnaire was structured along the objectives of the study and contained only closed ended items following a five point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The copies of the questionnaire were administered to respondents through drop and pick later method. The questionnaires were piloted in the neighboring Kwale County Government which has similar characteristics to Taita Taveta County prior to being administered for the study. Respondents from the pilot group did not participate in the actual study.

Content validity refers to the extent to which a measure represents all facets of a given construct. This research used content validity was used to ensure that all the items used in the questionnaire represented the known facets of their respective constructs. To achieve this, the questionnaire was discussed and reviewed with other peer researchers and experts to ascertain the validity of the measures used as per their respective constructs.

This study adopted internal consistency method to estimate test reliability. Internal consistency was tested using the Cronbach's alpha. The result of the instrument reliability is as shown in Table 1.

**Table 1: Results of the Reliability Test**

<b>Variable</b>	<b>Cronbach's Alpha</b>	<b>No. of Items</b>
Financial Resources	0.811	3
Human Capital factors	0.760	5
Implementation of drought management strategies	0.796	4

The Cronbach's alpha coefficient for the two constructs was each higher than the recommended alpha of 0.70 or above and was, therefore, accepted for the study (George & Mallery, 2003).

Analysis of data collected was conducted through descriptive and inferential statistical methods. Descriptive statistical analysis was carried out using frequencies and percentages while inferential data analysis was done using the Simple Linear Regression to determine the relationship between variables and allow for generalizations to the larger population. The data was presented using frequency distribution tables, charts and figures. A total of 81 respondents sampled from National Drought Management Authority, government line ministries, NGOs heads and community based organizations heads involved in drought management in Taita Taveta County were issued with questionnaires. However, only 64 respondents returned their questionnaires filled correctly translating to a 79.01% response rate. This response rate was considered adequate as recommended by Babbie (2002) and

Mugenda and Mugenda (2003). The instrument response rate for the study is given in Table 2.

**Table 2: Response Rate**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Returned	64	79.01
Not returned	17	20.99
<b>Total</b>	<b>81</b>	<b>100.0</b>

#### **4.0 Results**

##### **4.1 Human Resource and Implementation of Drought Management Strategies**

The first objective of the study was to investigate the extent to which human capital development influence the implementation of drought management strategies in Kenya. A five point Likert scale was used to rate responses of this variable and it ranged from 1 = strongly disagree to 5 = strongly agree and was analysed on the basis of frequencies and percentages. The findings are given in Table 3.

**Table 3: Perception of Human Resource and Implementation of Drought Management Strategies**

<b>Human Resource development</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
Continuous training of the employees influences the implementation of the drought management strategy by NDMA.	1(1.6%)	1(1.6%)	25(39.1%)	27(42.2%)	10(15.6%)
In-service training for the employees influences the implementation of the drought management strategy by NDMA	0(0%)	0(0%)	11(17.2%)	37(57.8%)	16(25%)
Other professional initiatives for the employees influences the implementation of the drought management strategy by NDMA	0(0%)	22(34.4%)	0(0%)	15(23.4%)	27(42.2%)
Grants and scholarships in education for the employees influences the implementation of the drought management strategy by NDMA.	0(0%)	2(3.1%)	9(14.1%)	32(51.6%)	21(32.8%)

Looking at the results in Table 3, it is evident that majority of the respondents (57.8%) were of the view that continuous training of employees in the organization influences the implementation of drought management strategies. The results also indicate that most of the respondents agreed that in-service training for organizational employees on matters of drought management have an influence on the implementation of drought

management strategies (82.8%). Further, most respondents agreed that other professional initiatives for the employees influences the implementation of the drought management strategy by NDMA (65.6%). Lastly, majority of the respondents (84.4%) were of the opinion that provision of grants and scholarships in education for the employees are instrumental in the implementation of the drought management strategy by NDMA.

It can be deduced from these findings that human resource development through training was important to equip the employees with the required skills, knowledge, tact and abilities for strategy implementation. The trainings could be varied from in-service courses to related professional courses. However, as indicated by majority of the respondents, there was need for the organizations to facilitate these trainings through provision of grants and scholarships. These findings agree with the findings of a report by OECD (2013) on the influence of human resource development in strategy implementation in G8 countries that revealed that human resource development enables the employees to acquire skills, knowledge, abilities, values, and social assets that shall enable the employees to comprehend and understand how and when to implement the specific parts of the strategy.

#### **4.2 Financial Resources and Drought Management Strategies Implementation**

The study also sought to examine the influence of financial resources on drought management strategies Implementation in Kenya. The findings are given in Table 4.

**Table 4: Distribution of respondents' perception on financial resources**

<b>Financial resources</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
Amount of finances influence the implementation of drought management strategy by NDMA in the county	7(10.9%)	9(14.1%)	6(9.4%)	31(48.4%)	11(17.2%)
Sources of finances influence the implementation of drought management strategy by NDMA in the county.	0(0%)	11(17.2%)	10(15.6%)	32(50%)	11(17.2%)
Frequency of financing influence the implementation of drought management strategy by NDMA in the county	0(0%)	0 (0%)	11(17.2%)	35(54.7%)	18(28.1)

From the findings in Table 4, it is evident that majority 65.6% of the respondents were in agreement that the amount of finances influence the implementation of drought management strategies. Most of the respondents (67.2%) also agreed that the sources of the finances influence the implementation of the same strategies by NDMA. The results also indicate that most of the respondents were of the view that the frequency of financing influence the implementation of drought management strategy by NDMA in the county (82.8%). These findings imply that the amount, sources and frequency of financing were all viewed as important to the implementation of drought management strategy by NDMA in the county. However, more emphasis was attached on the frequency of financing implying that the disbursement cycles were critical to the implementation of programs. In other words, the funding regimes needed to be dependable for the implementation processes to be successful.

Further, these findings agree with those conducted by the World Food Programme (2008) on The Safety Net Role of Food Aid in Kenya which established that Sustainable sources of financial support, sufficient amount and continuous/timely flow of financial resources influence the implementation of food aid and drought management strategy implementation.

#### **4.3 Status of Drought Management Strategies by NDMA in Taita Taveta County, Kenya**

The findings on the implementation status of drought management strategies by the NDMA in Taita Taveta County, Kenya are given in Table 5.

**Table 5: Perception on drought management strategies**

<b>Statements</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
Drought management strategies have been effectively implemented through good financial resource mobilization	1(1.6%)	27(42.2%)	1(1.6%)	25(39.06%)	10(15.6%)
Successful implementation of drought management strategies in organizations have been realized through competent human resources	7(10.9%)	11(17.2%)	6(9.4%)	31(48.4%)	9(14.1%)
Climate-proofed infrastructure has improved drought management strategies	0(0%)	9(14.1%)	21(32.8%)	19(29.7%)	15(23.4%)
Political goodwill from the local and national leaders has been instrumental in drought management strategies implementation in the area	0(0%)	0(0%)	16(25%)	37(57.8%)	11(17.2%)

The findings in Table 5 indicate that majority of the respondents (54.66%) agreed that effective implementation of drought management strategies in the area was achieved through good financial resource mobilization. The results also indicate that most of the respondents felt that successful implementation of drought management strategies in organizations was realized using competent human resources (62.5%). Most respondents were of the opinion that climate-proofed infrastructure improved drought management strategies in the area (53.1%). Further, majority of the respondents (75%) were of the view that drought management strategies implementation in the rea had been achieved through political goodwill from the local and national leaders. These findings suggest that for proper implementation of drought management strategies in the area, there was need for adequate financial resource mobilization; well spelt sufficient and well streaming sources of finances. A robust human resource base together with climate proof infrastructure was also important for strategy implementation. In addition, drought management strategies in the area required political goodwill from the local and national leaders.

These findings agree with those of a study done by Food for Asset (2013) on the successful implementation of drought management strategies that established that human resources availability; their knowledge and skills influence the implementation of such strategies. The findings also agree with the WFP (2015) that the success of these strategies was tied to a number of factors across the country, such as, politics, financial resources and availability of qualified manpower among other things.

#### 4.4 Regression Analysis

Multivariate regression was performed to establish whether human capital and financial resource factors significantly influenced strategy implementation by the NDMA in Taita Taveta County, Kenya are given in Table 6.

**Table 6: Regression of Human Capital Development on Implementation of Drought Management Strategies**

Model Summary		R	Adjusted R	Std. Error of the Estimate		
		R Square	Square			
		.422a	0.178	0.151	1.0904	
ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Regression		15.707	2	7.853	6.605	.003b
Residual		72.528	61	1.189		
Total		88.234	63			
Model Coefficients		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1 (Constant)		20.508	1.783		11.503	0.000
Human Resources		-0.089	0.096	-0.109	-0.925	0.359
Financial Resources		0.188	0.057	0.389	3.301	0.002

a. Dependent Variable: Strategy Implementation

b. Predictors: (Constant), Financial Resources, Human Resources

The overall regression model summary in Table 6 indicates that a joint model of human capital factors and financial resource factors could explain up to 15.1% (Adjusted R- Square = 0.151) of the variations in the strategy implementation by the NDMA in Taita Taveta County, Kenya. The model ANOVA is also significant ( $p \leq 0.05$ ), thus, validating the model. Further, the standardized beta values suggest that human capital development did not have a significant statistical relationship with drought management strategy implementation by NDMA ( $\beta = -0.109$ ,  $p = 0.359 > p \leq 0.05$ ). However, the findings also indicate that the financial resources variable had a significant relationship with strategy implementation by NDMA ( $\beta = 0.389$ ,  $p = 0.002 < p \leq 0.05$ ). Therefore, a unit change in availability of financial resources would translate to a 0.389 change in standard deviations in the implementation of drought management strategies in the area.

The findings concur with Tadesse (2016) whose research on Drought Risk Management and Enhancing Resilience in Africa established that efficient and effective

organizational structure and mechanism as well as human resources with rich experience, knowledge, and skills are vital for effective disaster risk management system.

## **5.0 Discussion and Conclusion**

The findings of this study corroborate with KFSSG (2013) that financial resources have the greatest influence in the implementation of drought management in the country. The findings further concur with those of a World Bank (2014) study that also indicated that financial resources are vital in providing alternative cash for assets to the communities living in ASALs in Kenya; money is required to employ field extension offices, other drought management experts; money is required to acquire modern technology, funds to develop and implement policies, money is required for M&E of the programmes and many more. Theoretically, the findings on financial resources agree with Ambrosini and Bowman's (2009) perspective on the resource based view that the competitive advantage of an organization lies primarily in the application of a bundle of valuable tangible or intangible resources at the firm's disposal such as finances in the present case.

However, the findings that human capital development did not significantly influence drought management strategies in the NDMA is an indicator that the organization had not taken significant efforts to develop its human capital. This is inconsistent with the first aspect of human capital theory which emphasizes the development of skill set of an individual to improve on productivity (Mahroum, 2007). According to Olaniyan and Okemakinde (2008), the relevance of knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom by an employee in organization determines the productivity of such an employee.

From the findings of this study, it can be concluded that mobilization of financial resources significantly influence the implementation of drought management strategies. The amount of finances, the sources of financing and the frequency of financing was found to be imperative in strategy implementation. This is because in mitigating drought, financial resources are needed to hire expertise, hire researchers, hire relevant materials like machinery, mobilize and reach the community. Money is also required to employ field extension offices, other drought management experts; money is required to acquire modern technology, funds to develop and implement policies, money is required for M&E of the programmes and many more. The study, however, concludes that human capital development as currently carried out in the NDMA in Taita Taveta County did not significantly influence the implementation of drought management strategies. This means that there were gaps in human resourcing that needed to be filled for successful implementation of the strategies in the organization. Particularly, the HR must be equipped with the required skills, knowledge, tact and abilities through continuous training, scholarships/grants and in-service courses. This is aimed at giving the HR the competencies they need to efficiently execute their responsibilities.

## Recommendations

The study recommends that successful drought management strategies implementation require adequate financial resources. This is because building resilient drought management programmes in an environment of scarcity requires good financing from stakeholders. Therefore, as indicated by majority of the respondents, it will be important that the financing regime be dependable in terms of disbursement of finances for stability of the programmes. The study found that there were gaps in human resourcing that needed to be filled for successful implementation of the strategies in the organization. Therefore, the study also recommends that more emphasis should be put on continuous training of employees, particularly, on in-service training and professional courses should be used to equip employees with skills, knowledge, tact and competencies required to implement drought management strategies. The organization should, therefore, factor in training in their budgets and also source scholarships for their staffs.

While the present study has focused on factors such as financial resources and human capital development and their influence on drought management strategy implementation in Kenya, there are numerous other factors that can be examined such as Technology advancement, social influence, community engagement, and economic factors. The present study was based on Taita Taveta County while others can be based on other areas especially the ASALs counties such as Mandera, Turkana and Marsabit.

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