

Drivers, Institutional Arrangements and the Impact of Resource-based Conflicts on Communities' Livelihood in the Tana Delta, Kenya

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Abstract: *Drivers, institutional arrangements and their impacts of resource-based conflicts on communities' livelihood is major concern in the current literature. The purpose of this paper is to: (i). find out the drivers of resource-based conflicts in the Tana Delta (ii). examine the organisational arrangement and the extent to which they influence resource based conflicts in the Tana Delta and (iii). examine the effects of resource-based conflicts on the communities' livelihood strategies in Tana Delta. Descriptive survey method where semi-structured questionnaires were administered was used to collect data. Qualitative data was collected through interviews with key informants. Data collection was guided by the needs and conflict theories. Analysis was done using a combination of descriptive and content analysis. A number of drivers to resource based conflicts were found in Tana delta namely: scarcity of resources, political incitement, competition for resources, climate change, ethnic rivalry, human wildlife conflicts; institutional arrangements and gender related conflicts. The results also shows that there are well organized institutional arrangements for resource use conflict management. It was finally found that resource-based conflicts has impacts on the communities' livelihood strategies. It is recommended that community conflict resources based drivers, institutional arrangements and resource-based conflicts are key in decreasing or increasing communities' livelihood.*

Keywords: drivers, institutional arrangements, impact of resource-based conflict, communities' livelihoods, Tana Delta, Kenya

1. Introduction

The World Commission on Environment and Development (1987) points out that nations have often fought to assert or resist control over environmental resources. Malaquias (2001) observes that it is "not accidental that some of the nastiest wars in Africa are being fought in countries richly endowed with natural resources. In the last sixty years, at least 40 per cent of civil wars on the African continent have been connected with natural resources (Humphreys, 2005; United Nations (UN), 2012). Resources based violent conflicts have direct, immediate and shocking impacts, including injury, battlefield and civilian deaths, the destruction of household assets and displacement (Klopp, 2010).

Violent resource use conflicts also have indirect and long-term poverty impacts though the increase of dependency ratios (Stewart, 2000). They lead to: (i) damage of public infrastructure and assets, disruption of community livelihoods and reduction of savings (ii) undermine law and order, and political processes and (iii) they result to social and cultural erosion, and dislocation (Goodhand, 2003). For instance resource based conflicts have led to the generation of over 3 million African refugees (Knickmeyer, 2007), which is costly for host countries since the refugees put pressure on domestic resources, jobs and services (Goodhand, 2003).

Conflicts arise when conservation and environmental management policies are not holistically formulated in order to balance conservation with the needs of the people (Alida and Salome, 2009). Environmental conflicts therefore, are manifestations of the interrelatedness among the

environmental components and they range from intrapersonal, inter-personal to inter-state conflicts (Alida and Salome, 2009).

The key types of conflicts include; biodiversity conflicts which are between people and wildlife or any other aspect of biodiversity (White et al., 2009; Bob 2010). Institutional arrangements also play a key role in resource based conflicts (White et al., 2009). Institutions are defined as the "rules" in any kind of social structure, i.e. the laws, regulations and their enforcement; agreements and procedures (Uphoff, 1986). Institutional arrangements are both formal and informal rules (Meyer and Rowan, 1977). The formal sector institutions are codified in constitutions, statutes, regulations, plans and policies (Nurse and Kabamba, 1999). The informal institutional arrangements are manifest in social expectations such as the rules governing relationship in a family, firm or community (Smajgl et al., 2004). The interaction of various actors with diverse interests in a particular resource may result in conflicts regardless of the institutional framework guiding natural resource use (Dean and Jeffrey, 1986).

Conflicts are expressed in a variety of ways such as confrontational, 'hidden transcripts' or 'the everyday forms of peasant resistance' (Scott, 1987) and social tension that is played out in gossip and witchcraft accusations. Confrontational conflict is often violent (Matondi, 2001). However, with the breakdown of traditional practices and the penetration of global economic forces to the local level, such conflicts often come under the jurisdiction of states (Chevalier and Buckles, 2013). In peripheral regions, states have often acted to assert authority for security reasons, national identity and nation-building against the interests of

local resource users. Further, the states are increasingly constrained in ability to act unilaterally, even in matters over which they may have constitutional jurisdiction, such as natural resources (Lindsay, 1998).

There are also a variety of ways in which the direct actions (or inactions) of policy-driven government agencies can contribute to resource conflicts (Lindsay, 1998). Uncoordinated planning and investment by sectoral agencies typically prepare land and resource plans, zoning strategies and maps that reflect their own objectives. The plans may be contradictory at the local level (Cernea, 1988); inadequate or obsolete data and a limited understanding of local resource uses are common problems in many developing countries (Tyler, 1999). Many countries have tenure systems for land and resources that either reflect historical inequities in wealth and political power or have been modified to encourage large-scale industrial agriculture and capital investment (Tyler, 1999). The interests of small-scale and marginalized farmers have been widely ignored, as a result, these people become involved in disputes over resources that they have traditionally used or managed, but to which they have no legal claim (Tyler, 1999). Such situations have frequently arisen as a result of government policies intended to promote industrial agriculture or forest plantations (Posgate, 1998). Both voluntary and involuntary resettlement can lead to deprivation and conflict, even when they are planned and supported financially by government or other project sponsors (Cernea, 1988).

Whatever the causes of farmer-herdsmen conflicts are, it is evident that the conflicts have been of great negative effects to their livelihoods. These range from economic effects (such as loss of income/resources/yields) to physical (such as home/farm destruction, bodily injury or death of family members) and socio-psychological effects such as emotional exhaustion, job dissatisfaction as well as ecological impacts such as land degradation, salinization of water and habitat fragmentation, loss of critical livelihood support assets, such as houses, educational infrastructure, land, crops and livestock may be destroyed or looted and indirect impacts on people's livelihoods which include decimation of basic services and governance structures, and loss of access to employment, markets, farms or traditional grazing pastures through limitations of people's movement (Solagberu, 2012).

By increasing the scarcity of basic necessities such as food and water resources, environmental degradation further increases the likelihood of violent conflicts (Onuoha, 2008). In Kenya, approximately 2 million people are affected by resource use conflicts, either directly or indirectly (Wilson and Tisedel 2003). These conflicts revolve around cattle raiding, land and grazing rights (Mghanga, 2010). Both pastoralists and farmers are also against the government supported land adjudication process, where land that had been taken away from the communities during the colonial times became government land and some of this land has been alienated by political elites from other regions (Kinyanjui, 2008). It is on this basis that this study sought to understand the impacts of resource use conflicts on livelihood in Tana delta SubCounty, Kenya. The residents in this area are mainly farmers and pastoralists. The specific research objectives were:- (i). To find out the drivers of resource-based conflicts in the Tana Delta (ii). To examine the organisational arrangement and the extent to which they influence resource based conflicts in the Tana Delta (iii). To examine the effects of resource-based conflicts on the communities' livelihood strategies. The article is innovative in a number of ways. First, it advances the needs and conflicts theories. Second, it analyzes the drivers, institutional arrangements and the impact of resource-based conflicts on communities' livelihood which a new case study.

2. Methodology

The study was conducted within the Tana Delta (Figure 1). Tana Delta (02°27'S 040°17'E) is the second most important estuarine and deltaic ecosystem within the Eastern Africa region, and Kenya's largest river deltaic ecosystem. The Tana Delta covers an area of 163,600ha (404,000 acres) that is endowed with high biological diversity. The delta is a highly fragile, dynamic, extremely rich and important wetland ecosystem. The area floods during times of good rain and dries out during droughts, therefore, highly sensitive to the hydrological system of the area, as it maintains its delicate natural balance and ecosystem processes.

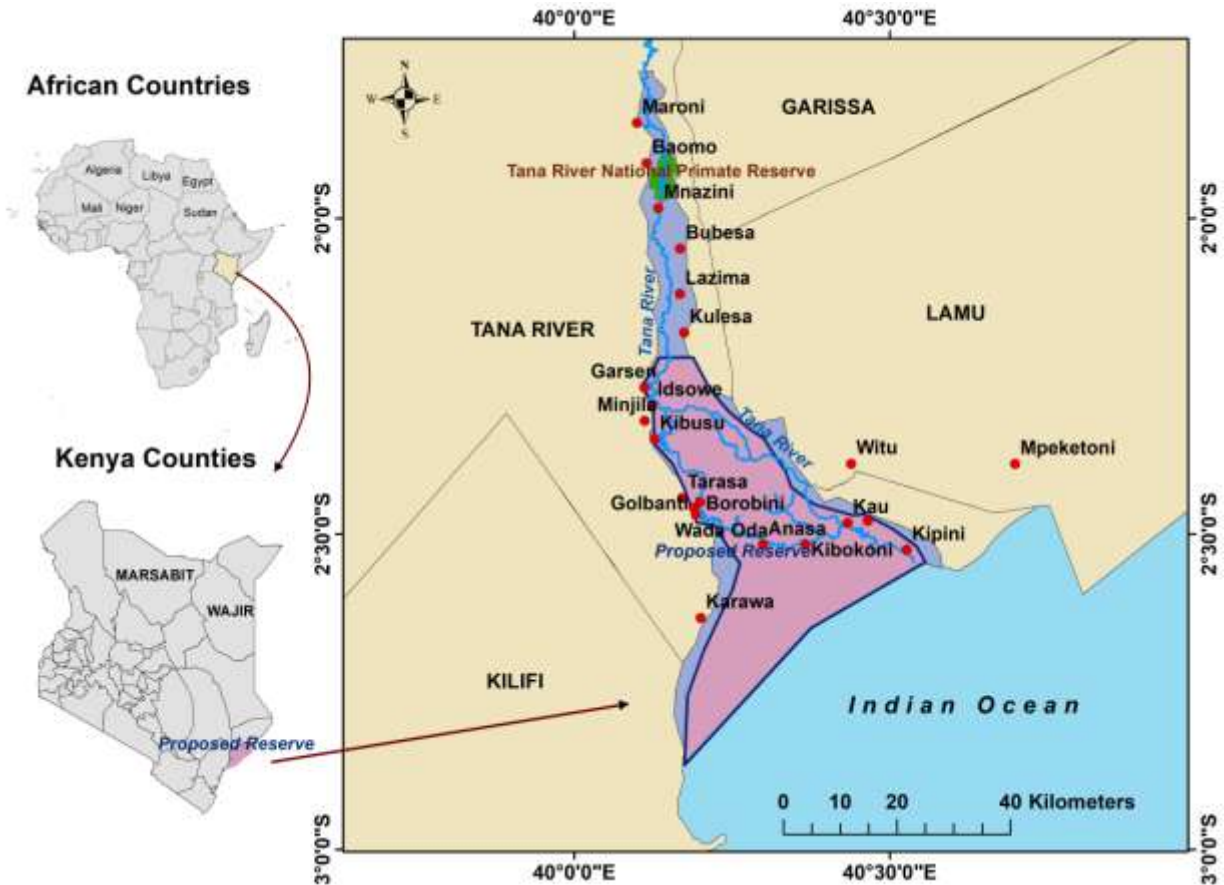


Figure 1: A map of study area showing administrative boundaries

The researcher used cross-sectional survey research design (Ross, 2002). This research design is appropriate in discovering and understanding the experiences, perspectives and thoughts of the study communities about the drivers, institutional arrangements and the effects of resource-based conflicts on communities' livelihood (Mugenda, 2003). The study employed both qualitative and quantitative methods in data collection (Alise & Tiddie, 2010). The study targeted the population of residents and existing institutions in Tana delta as the sampling unit for data collection (Table 1). A method by Ross (2002) was used to determine the study sample size (Table 1). The data was analyzed using the Statistical Package of Social Science (SPSS). The research hypothesis were tested using the Chi-Square and ANOVA.

$$n = \frac{N}{1 + N(e)^2}$$

Where: n= Sample size, N= Population size e= Level of Precision at 95% level of confidence and P=5%

Table 1: Populations of study villages in Tana Delta and sample sizes

No.	Major Villages	No. of Households	Percentage	Sample Size
1	Shirikisho	790	4.2%	12
2	Idsowe	1061	5.6%	18
3	Dalu	619	3.3%	9
4	Galili	442	2.4%	6
5	Danisa	332	1.8%	5
6	Dumi	494	2.6%	7
7	Bilisa	1899	10.1%	30
8	Salama	911	4.8%	15
9	Mwina	1200	6.4%	22
10	Assa	327	1.7%	5
11	Ndera	1266	6.7%	23
12	Kipini	2165	11.5%	32
13	Ozi	249	1.3%	4
14	Kilelengwani	443	2.4%	6
15	Kipao	997	5.3%	17
16	Konemasa	774	4.1%	12
17	Chara	892	5.0%	15
18	Wachu Oda	1736	9.2%	27
19	Kurawa	1017	5.4%	17
20	Ngao	440	2.3%	6
21	Tarasaa	570	3.0%	9
22	Golbant	166	0.9%	3
Total		18,790	100	300

3. Results and discussions

Drivers of Resource-based Conflicts in Tana Delta

A number of drivers to resource based conflicts were found in Tana delta namely: scarcity of resources; political

incitement; competition for resources; climate change; ethnic rivalry; human wildlife conflicts; institutional arrangements and gender related conflicts (Table 2) (Goldsmith 2012; and Pickmeier 2012).

study found out a number of organizations were involved in the management of resources as indicated in the organogram (Figure 2).

Table 2: Mean variation for drivers of resource-based conflicts (n = 300)

Drivers of conflicts	Mean	Remarks
Scarcity of resources	1.69	Most Significant Relationship
Political incitement	1.61	More Significant Relationship
Competition for resources	1.59	More Significant Relationship
Climate change	1.57	More Significant Relationship
Ethnic rivalry	1.46	Significant Relationship
Human wildlife conflicts	1.15	Less Significant Relationship
Organisational arrangements	1.12	Less Significant Relationship
Gender related conflicts	1.02	Least Significant Relationship

Institutional Arrangements for Resource Management and resource based conflicts in Tana Delta

The second objective of this study was to examine the institutional arrangement for resource management. The

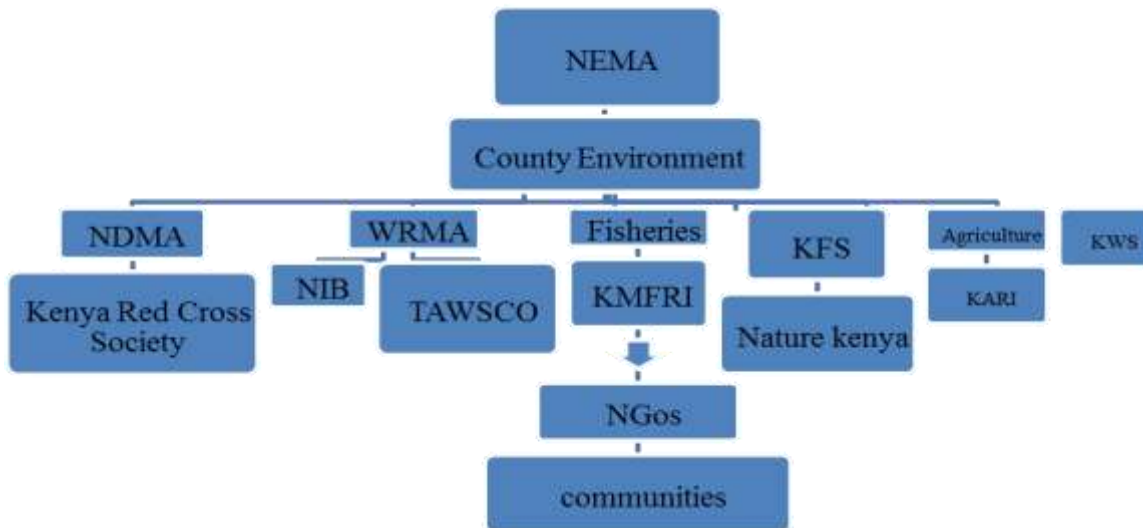


Figure 2: Organogram of the existing organizations in Tana Delta

The purpose of the organogram was to understand the working relationships of the community by examining their social structure, i.e. the laws, regulations and their enforcement; agreements and procedures. A majority 63% of the respondents were of the opinion that community rules and regulations for resource management within the area have relationships with those of NGOs dealing with the conservation, sustainable use and management of natural resources. Another 37% were not aware of any existing relationships between the traditional rules and regulations for resource management and those of the non-governmental organisations' (NGOs). This implies that the traditional rules and regulations are important for resource management.

The researcher examined where the respondents reported if a conflict occurred (Figure 3). About 50% of household respondents reported the incidences to community elders, 22% reported to the local administration, 16% reported to both the local administration and community elders, 4% reported to the agricultural officers, 4% informed the security and 4% reported the occurrences and incidents of resource-based conflicts to both the local administration and NGOs. Thus about half (50%) of respondents report the occurrences of resource-based conflicts to the community elders and another half (50%) report the conflict occurrences to relevant authorities (see Martin, 2007; Kinyanjui, 2008).

About 52% of the survey respondents were aware of community norms for management of resources but 48% of sampled households denied having knowledge of the constitutions for managing resources within their communities.

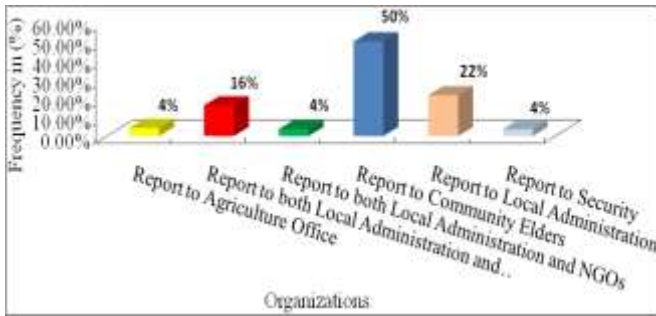


Figure 3: Reporting of resource-based conflicts occurrences in Tana Delta

The reserachers examined the benefits of local communities from the institutional arrangements for resource management in the Tana Delta (Figure 4). About 35% of the survey respondents reported that they sometimes benefit, about 24% of households thought they once a time benefited, another 23% believed they never benefited at all and only 18% of sampled households felt they always benefited from the establishment of institutions for resource (Bucx et al., 2014) Rosemarie et al., 2011)

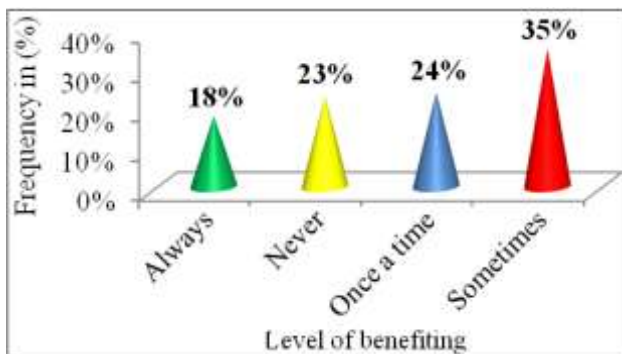


Figure 4: Level of community benefits from resource management organisations

Further, the study wanted to understand if the local communities were involved by the resource management organisations within the Tana Delta in resources management programmes (Figure 5). The results show that 38% of the survey respondents were never included, 33% of the households were sometimes included, 25% of the sample respondents were only included once a time and only 5% of the survey households were always included during the implementation of programmes by resource management organisations. This results, demonstrates the inadequacy of community involvement during implementation of resource management activities by the organisational arrangements in Tana Delta (Martin, 2012)

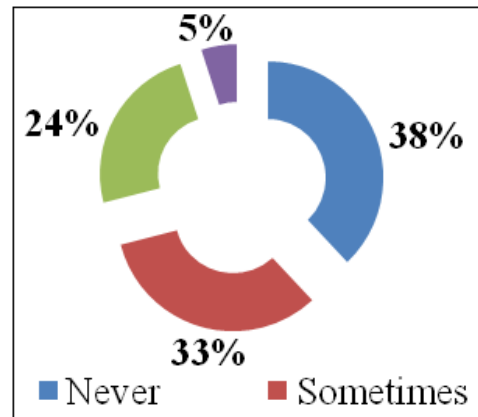


Figure 5: Level of community inclusion in resource management by organisations

When household were asked to comment about commnuty displacement, about 79% of the surveyed respondents denied the displacement of members of the local communities as a result of organisational existence within the delta and only 21% of survey households confirmed there were cases where local community members were displaced by the organisations' projects and programmes (Nunow, 2011; Goldsmith, 2012; Makutsa, 2010, Daniel & Mittal, 2009). The survey households gave different reasons (Table 3) for the displacement of local community members by the organisations. About 15% of the respondents believed displacement was caused by clashes over livelihood options, 4% of the households thought displacement was due to lost land for agriculture, 3% of the survey respondents felt the migrants sell land, 1% of the sample households said displacements was occasioned by administrative boundaries and 77% of the sample respondents were not aware of the reasons. (Klopp, 2010)

Table 3: Reasons for community displacement by organisations in TanaDelta (n = 300)

Reasons for displacement		Frequency	Percent (%)
Valid	Administrative boundaries	4	1
	Clash for livelihood option	44	15
	Lost land for agriculture	12	4
	Migrants sell land	8	3
	N/a	232	77

The views of the survey households were collected as to the types of land tenure systems possessed by households in the study area(Figure 6).

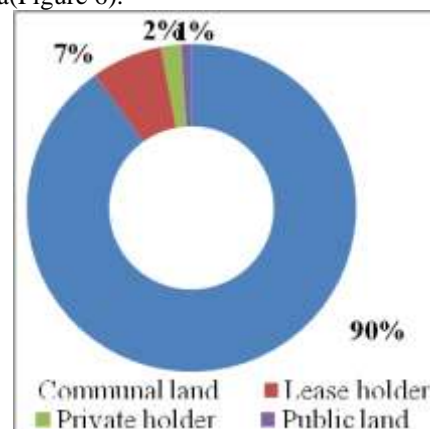


Figure 6: Land tenure systems existing in Tana Delta

About 90% of the sampled respondents confirmed the land tenure system is communal, 7% of households thought the land tenure is public, 2% of survey respondents believed the tenure system is lease hold and only 1% of sample households felt the land is private holder (Nunow, 2011, Kinyanjui, 2008).

The survey households explained how people got the land rights (Figure7), a large number about 49% of the households felt the issue of who allocated land in the area was not of concern to them, about 28% believed the government allocated land for development projects, 11% confirmed that land allocations by community elders, 8% of the survey respondents were not aware of who allocated land in Tana Delta and 4% of the survey households thought there was grabbing of some lands (Mghanga, 2010; Nunow, 2011).

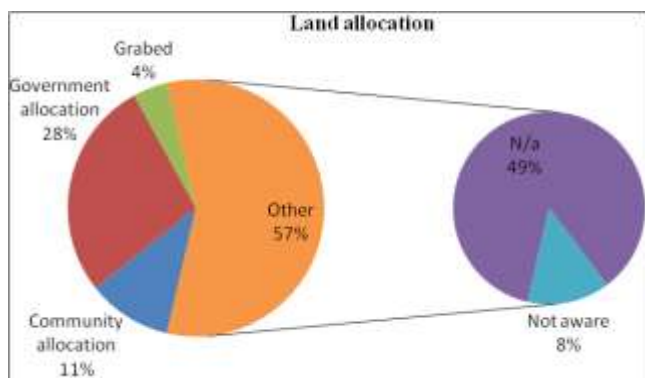


Figure 7: Respondents' views on who allocated land in Tana Delta

In order to examine the governance of land resources by local communities in Tana Delta, the researchers asked survey households to state which rights they have in using the land (Figure 8).about 91% of household respondents have all land use rights, 7% have no rights in using the land and 2% have somehow (unspecified) rights. These results

imply that a majority (91%) of community members have unlimited rights over the use of land, pasture and water resources within the Tana Delta (Nunow 2011, Kinyanjui, 2008 , Mghanga 2010).

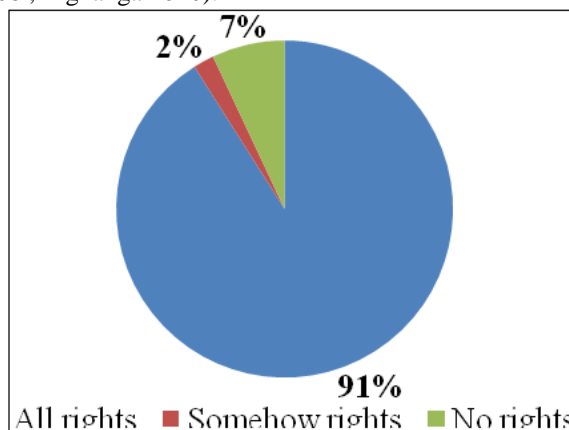


Figure 8: Levels of rights in using land within Tana Delta

The impacts of resource-based conflicts on the communities' livelihood strategies

The third objective of the study aimed at finding out the impact of resource-based conflicts on the communities' livelihood. First the study examined the trends of resource-based conflicts (Table 4). About 49% of the households believed that wildlife resources have declined while another 51% of the respondents thought that wildlife increased. However, an overall majority of the survey respondents confirmed that all resources declined as a consequence of resource-based conflicts except their divided opinions on the status of wildlife resources.

The results of survey households indicate significant decreases in various resources namely; water, vegetation, land and the marine ecosystem, which were observed by 98%, 83%, 79% and 75% of survey households respondents respectively.

Table 4: Resource trends as a result of resource-based conflict in Tana Delta (n = 300)

Resource / Condition	Respondents / Responses Percent (%)					
	Households		Focus Groups		Key Informants	
	Increased	Decreased	Increased	Decreased	Increased	Decreased
Water Resources	2	98	-	-	-	-
Land	21	79	25	75	10	90
Vegetation	17	83	0	100	10	90
Wildlife	51	49	25	75	30	70
Marine ecosystem	25	75	-	-	-	-
Mangrove	35	65	-	-	-	-
Land degradation	63	37	-	-	-	-
Salinization	60	40	-	-	-	-

Table 4.1: Resources and livelihood strategies decreased / increased as a result of conflicts (n = 300)

To test for hypothesis of the responses by household survey were further subjected to Chi-square tests in order to determine whether there exists relationships between decreases or increases of the different resources and livelihood strategies as a result of resource-based conflicts in the Tana Delta (Table 5) The study shows that there exists significant relationships between decreases of the resources and livelihood strategies on one hand, and inverse increases of wildlife resources on the other hand as a result of resource-based conflicts. The increase in wildlife can be

attributed to dryness of the river (reduced water resources), which permits free movement of wild animals, causes increased salinization, reduces pastures and displaces wildlife towards human settlements. These results imply that most of the resources and the resource dependent livelihood strategies of the communities have decreased while wildlife resources have increased within the Tana Delta.

Table 5: Relationships between decreases or increases of the different resources and livelihood strategies as a result of resource-based conflicts in the Tana Delta

Resource/Strategy	Chi-Square	df.	Asymp. Sig.	Remarks
Water Resources	276.480 ^a	1	.000	Significant relationship (Decrease)
Land	286.160 ^b	2	.000	Significant relationship (Decrease)
Vegetation	130.680 ^a	1	.000	Significant relationship (Decrease)
Wildlife	.013 ^a	1	.908	No relationship (Increase)
Marine ecosystem	235.220 ^b	2	.000	Significant relationship (Decrease)
Mangrove	139.860 ^b	2	.000	Significant relationship (Decrease)
Land degradation	20.280 ^a	1	.000	Significant relationship (Decrease)
Salinization	160.980 ^b	2	.000	Significant relationship (Decrease)

The researchers asked household whether they incurred relatives' deaths or injuries as a result of resource-based conflicts (Figure 9). About 58% of the respondents claimed to have incurred relatives' deaths/injuries during resource-based conflicts, while 42% did not have casualties. (Kenya Initial Rapid Assessments, 2012)

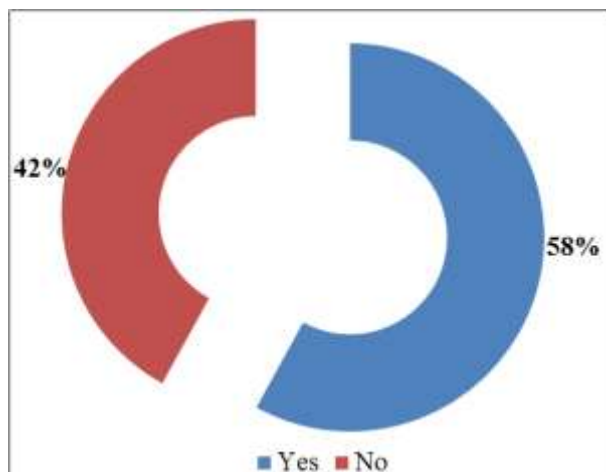


Figure 9: Relatives' deaths/injuries as a result of resource-based conflicts in Tana Delta

In order to determine the effects of conflicts on social structures and livelihoods of the communities, the researcher asked household whether they were aware of people who were displaced as a result of resource-based conflicts in Tana Delta (Figure 10.). About 53% of the respondents confirmed that some people were displaced as a result of resource-based conflicts, while 47% denied (Kenya Initial Rapid Assessments, 2012).

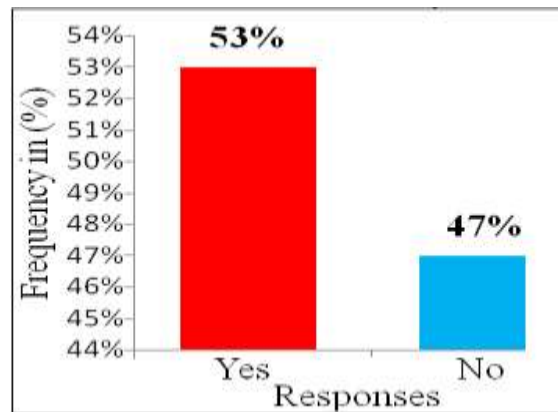


Figure 10: Displacement of communities as a result of resource-based Conflicts in Tana Delta

The study was interested in understanding the impacts of resource-based conflicts on livelihood strategies of the farmer and pastoralist communities living in the Tana Delta. The researcher asked the households whether their crops were destroyed during resource-based conflicts. The study shows that 63% of the respondents confirmed that there were crops destroyed during resource-based conflicts while 37% denied.

The investigator asked the survey households whether livestock were destroyed as a result of resource-based conflicts within the Tana Delta. The results (Table 6.) indicate that 59% of the survey respondents confirmed livestock were destroyed and 41% of the household respondents claimed livestock were not destroyed during the resource-based conflicts. These results imply that livestock were actually destroyed during resource-based conflicts in Tana Delta as illustrated by 59% majority of the household respondents.

Table 6: Livestock destroyed due to resource-based conflicts in Tana Delta (n = 300)

Response	Frequency	Percent (%)
No	124	41
Yes	176	59

The study examined the impacts of resource-based conflicts on market-based livelihoods of the local communities within the Tana Delta. The researchers asked the households whether markets decreased as a result of resource-based conflicts. The Table (Table 7). The study results illustrate the responses of survey households, which show that 79% of the respondents admitted the markets decreased, 20% of the respondents claimed the markets increased and 1% of the respondents were not aware of any changes in markets. These results imply that markets decreased as a result of resource-based conflict in the Delta, which was attested to by 79% majority of the survey respondents (Nunow, 2011).

Table 7: Market trends as a result of resource-based conflicts (n = 300)

Responses	Frequency	Percent (%)
Decreased	236	79
Improved	61	20
Not aware (N/a)	3	1

The researchers asked the households whether their social economic activities and livelihood strategies increased or decreased as a result of resource-based conflicts (Table 8). The study shows that all the social economic activities and livelihood strategies of the local communities decreased in the Delta area due to resource-based conflicts except firewood harvesting, which increased. The results imply that over 90% majority of the respondents believed the water bodies, crops, livestock and fish production have declined in the area as a result of resource-based conflicts. However, the opinions of survey households were divided with regards to firewood harvesting activities, which were thought to have increased by 53% of the respondents as opposed to 47% of the respondents who believed that firewood collection activities decrease. The industries and trade-based livelihood activities have also decreased within the Tana Delta as reported by 76% and 79% of the sample respondents respectively (Nunow, 2011).

Table 8: Trends social economic activities and livelihood strategies in Tana Delta (n = 300)

Socio-economic activities/ Livelihood strategies	Responses (%)			
	Decrease	Increase	Not applicable	Total
Water bodies	98	2	0	100
Crop production	97	3	0	100
Livestock production	94	6	0	100
Fish production	91%	9%	0	100
Firewood harvesting	47	53	0	100
Industries	76	20	4	100
Trade	79	21	0	100

The Chi-square test results (Table 9). The results indicate that most social-economic activities of the local communities decreases except firewood harvesting, which increases during resource-based conflicts within the Tana Delta area. This is probably due to the reduction of non-critical socio-economic activities, which can not deter continuation of life during resource-based conflict periods and promotion of livelihood strategies that are essential, safe and critical for the survival of affected communities within the Delta.

Table 9: Mean variation for social-economic activities and livelihood in Tana Delta (n = 300)

Resource/Activity/ Strategy	Chi-square	Df	Asymp sig	Remarks/ Interpretation
Water bodies	272.653 ^a	1	.000	Significant relationship (Decreased)
Crop production	268.853 ^a	1	.000	Significant relationship (Decreased)
Livestock production	228.813 ^a	1	.000	Significant relationship (Decreased)
Fish production	446.180 ^b	2	.000	Significant relationship (Decreased)
Firewood harvesting	1.080 ^a	1	.299	No relationship (Increased)

The researchers asked the survey households whether employment within the Tana Delta increased or decreased as a result of resource-based conflict. The responses of the survey households (Table 10). About 71% of the household respondents confirmed that employment decreased as a result of resource-based conflicts while 29% of the sample

respondents reported that employment improved in the Delta area.

The household qualitatively reported that the decrease of employment is due to the fact that it is not a critical livelihood strategy that can deter the continuation of life by local communities during resource-based conflicts. It is also common practice for employers to reduce or halt employee activities during periods of conflicts.

Further through qualitative explanations the respondents reported that the situation worsens due to displacement of people, tension and fear, which tends to scare away real and potential employers, entrepreneurs and development agencies from conflict prone areas like Tana Delta.

Table 10: Employment trends as a result of resource-based in Tana Delta (n = 300)

Responses	Frequencies	Percent (%)
Decreased	213	71
Improved	87	29

The study examined the vulnerability of local communities to natural disasters as a result of resource-based conflicts in the Tana Delta area. The investigator asked the survey households to express their opinions as to whether members of the communities were more vulnerable to natural disaster (increase) or less vulnerable (decrease) as a result of resource-based conflicts. The results (Table 11).

Table 11: Community vulnerability increased/decreased due to resource-based conflicts (n = 300)

Responses	Frequency	Percent (%)
Decreased	76	25
Increased	221	74
N/a	3	1

About 74% of the surveyed respondents confirmed that members of the communities were more vulnerable to natural disasters (increased vulnerability) as a result of resource-based conflicts in Tana Delta, while 25% suggested members of the communities were less vulnerable to natural disaster (decreased vulnerability) and 1% of household respondents were not aware of the possible consequences. These results therefore, imply that communities in the Tana Delta live under increased vulnerability to natural disasters due to persistent resource-based conflicts as depicted by 74% majority of the survey respondents

4. Conclusions and Recommendations

The objectives of the study were (i). find out the drivers of resource-based conflicts in the Tana Delta (ii). examine the organisational arrangement and the extent to which they influence resource based conflicts in the Tana Delta and (iii). examine the effects of resource-based conflicts on the communities' livelihood strategies in Tana Delta. It is concluded that a number of drivers to resource based conflicts were found in Tana delta namely: scarcity of resources; political incitement; competition for resources; climate change; ethnic rivalry; human wildlife conflicts; institutional arrangements and gender related conflicts. There is also an organization that has clearly established the

institutional arrangement for resource management in Tana Delta. This implies that the that traditional rules and regulations are important for resource management. It finally was found out that resource-based conflicts has impacted on the communities' livelihood strategies as they can either increased or decreased community livelihoods. It is recommended that community conflict resources based drivers, Institutional Arrangements and Resource-based Conflicts are key in decreasing or increasing Communities' Livelihood.

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