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Status of county adoption of national level policies on climate governance in select counties in Kenya

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Status of County Adoption of National Level Policies on Climate Governance in Select Counties in Kenya

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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APPROVAL

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ABSTRACT

Climate change is the biggest global environmental threat largely attributed to human activity as well as classic market failures of allocation, control and use of natural resources. Climate governance lays out modalities through which institutional interests are articulated, coordinated and negotiated, through formal and informal mechanisms for sustainable development. For Kenya domestication of policies in counties started after the 2013 devolution. This study examined the status of county adoption of National level policies on climate governance. It used a mixed scanning model informed by the political economy theory and systems theory to examine the extent of policy domestication, existing county climate governance structures, institutional capacity, barriers and enablers to climate governance. It involved primary data collection through key informants, and secondary data review for five target counties in Kenya involved in climate governance projects, with a variation of arid and semi-arid regions. It utilized both qualitative and quantitative methods and applied a descriptive-analytical approach. Results indicate low to medium policy domestication rates, low policy domestication capacities given lack of climate change units, low staffing capacities, limited technical knowledge, low access to climate finance, technology transfer, and limited private-sector engagements. This study concludes that political economy is salient to climate governance and supports previous findings that asymmetric power relations and low capacity for negotiations of climate finance and technological transfer characterizes climate governance in the Global South. Weak or non-existent governance institutions seven years into devolution perpetuates lack of citizen agency and slow policy domestication. Counties should prioritize overarching policy that then gives guidance to lower-level sector policies, e.g., in agriculture, energy for coherence and synergies, followed by selection of policy alternatives based on policy packages that deliver optimum outcomes. Technical and financial support, peer pressure and political goodwill contribute to policy adoption. Regional Economic Blocs can be targeted for policy domestication support for greater bargaining and negotiation power, and optimal outcomes. Deliberate efforts should be put in place to establish and operationalize county climate governance structures.

Key Words: *Climate governance, Policy domestication, Climate policy adoption and diffusion.*

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

ADPs	Annual Development Plans
AFPs	UN Adaptation Policy Frameworks for Climate Change
ASALs	Arid and Semi-Arid Lands
CBROP	County Budget Review and Outlook Paper
CCA	Climate Change Adaptation
CC	Climate Change
CGA	County Governments Act
CIDP	County Integrated Development Plan
CFSP	County Fiscal Strategy Paper
COK_2010	Constitution of Kenya _2010
GEF	Global Environment Facility
GOK	Government of Kenya
ILO	International Labour Organization
JOI	Johannesburg plan of implementation
MDGs	Millennium Development Goals
NCCFP	Kenya National Climate Change Framework Policy
NCCRS	Kenya National Climate Change Response Strategy
SDGs	Sustainable Development Goals
UNCBD	United Nations Convention on Biological Diversity
UNCCD	UN Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Environment Programme
UNDESA	United Nations Department of Economic and Social Affairs
UNISDR	United Nations Office for Disaster Risk Reduction
UNGA	UN General Assembly
UNFCCC	United Nations Framework Convention on Climate Change

DEFINITION OF TERMS

Agenda 21: a comprehensive plan of action to be taken globally, nationally and locally by organizations of the UN System, Governments, and Major Groups in every area in which human's impact on the environment (UN, 2018).

Annex 1 Countries /Parties: include the industrialized countries that were members of the Organization for Economic Co-operation and Development (OECD) in 1992, plus countries with economies in transition (EIT Parties), (UNFCC, 2018).

Climate Change Adaptation (CCA): is a process by which individuals, communities and countries seek to cope with the consequences of climate change, by focusing on current and incorporating future climate risk into policy-making (UNDP, 2004).

Climate governance: the rule-making and decision-making mechanisms and modes within a given system or society that determine how institutions' interests are articulated, coordinated and negotiated (Worker and Northrop, 2018).

Climate Change Performance Index (CCPI): An index that ranks 56 countries according to their GHG emissions, renewable energy development, energy use and climate policy; to enhance transparency in international climate politics.

Climate Risk Index (CRI)- measures a country's climate readiness through private and public enterprises, government, people and civil society anticipate, assessing how they prepare for, manage and respond to change and cultivate opportunity.

Non-Annex 1 Countries: Parties are mostly developing countries, especially those most vulnerable to the adverse impacts of climate change, like small islands states developing states (SIDs), and countries at risk of drought and desertification (UNFCC, 2018).

Sustainable Development: the concept of meeting the needs of present generation, without compromising needs of future generations, valuing natural resources as capital stock rather than just a consumption stream (Brundtland, 1987).

Technological transfer: a broad set of processes covering the flows of know-how, experience and equipment for mitigating and adapting to climate change. (UNFCC, 2000)

Policy adoption: first time introduction of a policy or set of policies in a given country (Walker, 1969)

Policy diffusion: process through which a previously adopted policy or set of policies spreads across jurisdictions over time and through certain channels (Berry and Berry, 2007)

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DEDICATION

I dedicate this study to my daughter, Nicole Mukami, as a source of inspiration for what one can achieve when they set their mind on the goal. And to my mother Mercy Mukami who has been a constant source of inspiration and determination.

"*The impact of climate change in Kenya is likely to be exacerbated by governance related problems, in particular weak institutional capacity in planning, budgeting and implementation and low resource management capability."* DDP, Theory of Change, pp 9

CHAPTER ONE

INTRODUCTION

This chapter covers global climate governance perspectives and a deep dive of national level climate governance, its costs and implications for the country. It discusses the problem statement, research objectives and questions, scope and significance of the study.

1.1 Background Information

Climate change (CC) is the biggest global environmental threat largely attributed to human activity as well as classic market failures of allocation, control and use of natural resources (IPCC, 2007; Todaro, 2015). It poses a threat to sustainable development, food and economic security, resilience, pollution, biodiversity, desertification, land degradation, human development and conflict, with poorest, least developed countries and lowest contributors facing the hardest highest brunt (Brown & Hammil, 2007; Death, 2013 Trócaire, 2014; Todaro, 2015; MENR, 2016; UNFCC, 2018). The United Nations Conference on Environment and Development (UNCED) in 1990, laid the groundwork for promoting collective action by governments and development actors to address global governance on climate change. There have been follow-up negotiations involving national governments, private sector and other key stakeholders in CC governance, to identify common targets and indicators to address climate change at national and subnational levels, taking into account different contexts and capacities. These have resulted in numerous frameworks for global governance on climate change, setting global targets, and indicators for monitoring, establishing the Global Environment Facility (GEF) for financing the interventions for climate change adaptation (CCA) and mitigation strategies, as well as technology transfer.

The Agenda 21 (1992), the Paris Agreement (2015) and the SDG (2015-2030) aim for globally collective action to develop and implement mutually supportive objectives that take account of the interrelationships between people, resources, environment, and development; through voluntary Nationally Determined Contributions (NDCs), aiming for resilient and sustainable, low-emissions development (Brundtland, 1987; Todaro, 2015; Worker, 2018). The Marrakech Partnership for Global Climate Action (2017) seeks to fast-track between 2017 and 2020 the support for achievement of NDCs, tying in the nexus between environment and development, through sustainable development Goals 2015-2030. The Sendai Framework for Disaster Risk Reduction (SF-DRR) 2015–2030, supported by the Hyogo Framework for Action, guides

countries to adopt disaster risk reduction (DRR); build resilience to climate shocks and disasters; to identify modalities for cooperation on post-2015 DRR framework and to conduct periodic reviews (UNSDG, 2015; UNFCCC, 2017). These frameworks therefore spearhead climate action and sustainable development seeking to create policy coherence and guide climate change governance. There have been regular climate change negotiations on the global scene to influence the global response to climate change, and with notable adoption of the Kyoto Protocol (1997); which legally binds developed country parties to greenhouse gas (GHG) emission reduction targets. There have been so far two commitment periods, the first from 2008-2012, and the second from 2013-2020, which is the Doha Amendment to the Kyoto Protocol; to which Kenya accepted and ratified on 25 February 2005, and 7 April 2014 respectively (UNFCCC, 2017).

According to the Climate Change Performance Index Report (CCPI-2018) progress towards the achievement of the Paris Agreement (2015) is tracked through measurement of implementation of mitigation targets at the national level. Current performance by countries is poor, having first three positions in the CCPI unoccupied due to dismal performance globally (Burck, Marten, Bals & Höhne, 2018). According to the report, some of the countries that have ranked highly for CCPI, are Sweden, Lithuania, Morocco, Norway and United Kingdom, scoring highly due to investments in renewable energy as well as national policy adoption and participation in global policy negotiations. Other drivers are commitment to offshore wind, and coal phase-out (UK); shift from production-based to a service-oriented economy; and plans to abolish petrol and diesel vehicles post 2030-40 (UK); forest growth and reduced agricultural emissions due to reduced livestock numbers and mineral fertilizer usage (Sweden). No doubt, the issues on CC are complex, and very dynamic, involving many sectors and actors, and facing a lot of conflict of interests among various stakeholders.

1.1.1. Climate Risk and its Relevance

Kenya occupies total land area of 582,644 km^2, of this of which 58,037,000Ha is dry land, 27,630,000Ha is agricultural land and 4,413,000 Ha is forested (FAO, 2016). Majority, 82% of total land area cover comprises of Arid and Semi-arid lands (ASALs), forming 23 out of the 47 counties and receiving less than 700 mm of rain per year (FAO, 2019). This is an increase of 2% from 39% for arid and 41% for semi-arid areas (80% in total); and 7% for dry sub-humid area, and 13% for sub-humid to humid area (FAO, 1990). ASALs currently hold >50% of the livestock population, however they lack livestock holding capacity due to poor land management practices,

and lack of vegetation and pasture regeneration, putting the land under more pressure, (FAO, 1990; Kenya Vision 2030, 2007). Recurrent droughts contribute to chronic and multiple vulnerability especially in ASALs, due to simultaneous shocks like loss of productive assets, natural resource conflicts, reduced productivity, resulting from and to weak adaptive capacity to withstand, recover and bounce back; as well as low institutional capacity for mitigation, preparedness, response and recovery. Unlike humanitarian climate shocks affecting other countries (rapid-onset shocks), Kenya is mostly prone to slow-onset humanitarian crisis that can be addressing through effective climate policy, planning, early warning and early action. Through the recent trends available for the past 25 years, the country and counties should be able to predict likelihood of climate shocks, and prioritise action, anchored in policy, and based on the local context and community needs.

These shocks have left indelible mark on economy, through loss and damage on property, community and environment due to increased vulnerability and reduced adaptive capacity, leading to massive cost in drought response and recovery. Kenya needs proactive policies and mechanisms to avert loss and damage as opposed to being reactionary. Numerous reports have indicated the increased vulnerability to Kenya to climatic shocks, most significantly drought, which has increased in both frequency and severity. In the last 100 years the country has experienced over 30 droughts, with the most recent being in 1983/1984, 1991/1992, 1996/1997, 1999/2001, 2005/06, 2008/09, 2011/2012, 2016/2017 (PDNA, 2012, pp161; UNOCHA website, Kenya: Drought (2014-2020).

To effectively address climate change, it must be analyzed as an economic issue to show the costs to government, development actors, private sector and individuals. In the absence of such and analysis, CC remains as a distance problem policymaker's minds, hence the inaction as it is removed from their direct sphere (tragedy of commons). According to the *Kenya Post-Disaster Needs Assessment (PDNA) Report- 2008-2011,* the overall effects of the 2008-2011 drought in Kenya have been estimated at Ksh 968.6 billion (US$12.1 billion); broken into KSh. 64.4 billion (US$805.6 million) damage to assets; and Ksh 904.1 billion (US$11.3 billion) for losses in the flows of the economy across all sectors; Table 1.1, (PDNA, 2012), pp4.The report indicates that the most affected sector is livestock, incurring Ksh. 699.3 billion, followed by Agriculture with Ksh. 121.1 billion, and water and sanitation at Ksh 88.2 billion. The costs of recovery are also high for these three sectors, hence the need for allocation into the sectors to ensure increased climate resilience and climate change adaptation.

Table 1.1 Estimated Cost of Drought in Kenya 2011-2013 – (in Million KSh.)

Sectors	Impact			Needs			Indicative DRR Needs
	Damage	Losses	Total	Recovery	Reconstruction	Total	
Agriculture	-	121,104.10	**121,104.10**	5,048.80	-	**5,048.80**	13,736.80
Livestock	56,141.70	643,194.50	**699,336.20**	50,237	56,142	**106,379**	85,103.00
Fisheries	502.6	3,661	**4,163.60**	406.4	753.9	**1,160.30**	2,991.20
Agro-industry	-	7,159.60	**7,159.60**	-	-	**-**	-
Health	-	4,745.70	**4,745.70**	-	-	**5,099**	-
Nutrition	-	6,699.40	**6,699.40**	225.1	-	**225.1**	130.9
Education	41.9	3,937.80	**3,979.70**	590.1	55.7	**645.8**	3,592.10
Energy	-	32,392.30	**32,392.30**	13,000	-	**13,000**	-
Water & Sanitation	7,736.10	80,466.90	**88,203**	4,964.20	12,304.10	**17,268.30**	78,627.30
Environment, Tourism, Forestry & Wildlife	22.2	762.4	**784.6**	7,387.90	-	**7,387.90**	647.5
Total	**64,444.50**	**904,123.70**	**968,568.20**	**86,958.50**	**69,255.70**	**156,214.20**	**184,828.80**

Source: Kenya Post-Disaster Needs Assessment (PDNA), pp 4

The highest damage and loss was felt in Rift Valley (45.8%), followed by Eastern (15.5%), and North Eastern (8.8%) and Central (8.6%) as indicated in Table 1.2. Turkana county falls in the Rift Valley, while Marsabit, Makueni, Embu and Tharaka Nithi fall in the Eastern provinces, which experienced the highest damage and losses due to the 2011-13 drought, Table 1.2.

Table 1.2 Estimated Cost of Drought by Region 2011-2013- (in Million KSh.)

Province	Central	Coast	Eastern	Nairobi	North-Eastern	Nyanza	Rift Valley	Western	Total
Damage	3,572	1,844	15,362	327	10,784	4,331	23,428	4,797	64,445
Losses	79,086	21,686	132,748	7,543	72,890	101,768	413,858	61,737	891,316
Total	82,658	23,530	148,109	7,870	83,674	106,099	437,285	66,534	955,759
% of Total	**8.6**	**2.5**	**15.5**	**0.8**	**8.8**	**11.1**	**45.8**	**7.0**	100

Source: Kenya Post-Disaster Needs Assessment (PDNA), pp 6

1.1.2. County Overview and Climate Risk Profiles

In Kenya, International Centre for Tropical Agriculture (CIAT) and the CGIAR Research Programme on Climate Change, Agriculture, and Food Security (CCAFS), in collaboration with the government have developed climate risk profiles for 31 out of the 47 counties. These profiles identify the major climate risk and root causes for climate change vulnerability of counties, to enable evidence-based planning and prioritization of climate change interventions given the local contexts (CGIAR, Accessed 2020). These reports form the basis for county level evidence -based climate policy and planning to prioritise actions. These together with the county's economic

mainstay should guide interventions on climate adaptation, bearing in mind the need to address adverse environmental degradation, both as a cause and effect of climate change.

1.1.2.1 Semi- Arid Areas- Embu, Makueni, T/Nithi

Embu county falls within the Mt. Kenya region, and falls in two broad agro-ecological zone, with cold and wet upper zones to hot and dry lower zones in the Tana River Basin. Manyatta and Runyenjes sub-counties with 2200 mm rainfall; Mbeere North and Mbeere South sub-counties are largely semi-arid experiencing 600 mm of rainfall annually (Farm Management Handbook 2006, p.87 cited in Embu, CIDP 2018, pp 3). It has a population of 608,599 (Female:304,367; Male: 304,208); (KPHS, 2019 vol 1, pp17). Average land size is 0.8Hectares (Ha), with high land and natural resource pressure in the productive areas, (Embu CIDP, 2018-22, pp16). Only 59.6% of land parcels in the county had title deeds, and absolute poverty is at 42% of the population, (KNBS,2006 cited in (MoALF, 2016), Embu County Climate Risk Profile, pp5 &6). The county is heavily reliant on agriculture: 70% on crop production and livestock keeping; largely rainfed-agriculture making households vulnerable to climate shocks like heat and moisture stress, drought and excess precipitation, (ibid, pp,13). Total county land under farming is 29% (82,600Ha), with 1067Ha under irrigation under 51 irrigation schemes, operating below potential' while more than 80% of the population is food secure due to high agricultural productivity; except in the semi-arid lowlands of Mbeere North and South, (MoALF, 2016), Embu County Climate Risk Profile, pp,4).

Tharaka-Nithi County is in the eastern part of Kenya, with a population of 393,177 (Female: 199,406; Male: 193,764)- (KPHS, 2019 vol 1, pp17). It borders the counties of Embu to the south and south-west, Meru to the north and north-east, Kirinyaga and Nyeri to the west, and Kitui to the east, and south east. Average land size is 2.9 ha for small farms, and 6.7 ha for large-scale farms (T/ Nithi, CIDP, 2018-2022, pp7), and 62% of the farmers have title deeds (MoALF, 2018), T/Nithi Climate Risk Profile, pp7; indicating private land ownership, hence the ability to invest in sustainable land practices for a large proportion of the population. About 80% of the population are farmers, with approximately 43,799Ha, under food crops, and 14,839Ha, under cash-crops, and a very high demand for irrigation water, (T/ Nithi, CIDP, 2018-2022, pp 26). The county's farming area is 1450KM^2 (54%). About 40% of the population is food insecure, and 35% is living in absolute poverty (MoALF, 2018), T/Nithi Climate Risk Profile, pp6. Tharaka Nithi County has a Climate Risk index 0.388, against a national index of 0.431; but faces extreme weather including drought, moisture stress, and high temperatures (MoALF, 2018), T/Nithi Climate Risk Profile, pp3. Future climate projections for the years 2021- 2065 indicate that the county will remain

highly susceptible to more days with moisture stress and continued moderate increases in temperatures. There is however expected to be a moderate decrease in length of drought spells as well as a slight decrease in intense rain.

Makueni County borders Machakos to the North, Kitui to the East, Taita Taveta to the South and Kajiado to the West, and lies in three agro ecological zones (AEZ), namely Mixed Farming coffee and dairy zone I, Mixed Farming food crops/cotton/livestock zone II and Marginal Mixed Farming cotton/beef zone III. It has a population of 987,653 (Female: 497,942; Male: 489,691)- (KPHS, 2019 vol 1, pp17). Agriculture is the predominant activity, accounting for 78% of the Gross County Product (GCP). The overview of land in Makueni is 65% (505,000Ha), arable land, 17% forests, and 48% bushlands, 5% grasslands, 6%, croplands 6%, 16%, barren lands 16%, while 8% is under intensive settlement (Makueni, CSP, 2019), pp8. Average land ownership is 1.58(Ha), with only 35% of population having title deeds (MoALF, 2016, Makueni Climate Risk Profile, pp6), and a high level of uncontrolled land fragmentation, landlessness and the existence of squatters (Makueni CSP, 2019.) Makueni county has a high climate vulnerability index of 0.437 slightly above the national index of 0.431; with 75% of the population reporting reduced agricultural productivity exacerbated by low adaptive capacity due to lack of skills and low technology adoption, (Richard et al., 2012) in (GoK, 2013) cited in (MoALF, 2016, Makueni Climate Risk Profile, pp13). Makueni County has relatively high poverty rate of 63% against the national average of 47%, food poverty rate of 57%; and low Human Development Index (HDI) of 0.48; largely due to low agricultural productivity attributed to recurrent drought and water stress, soil degradation; high unemployment rates; (GoK, 2013b) cited in (MoALF, 2016), Makueni Climate Risk Profile, pp6.

Over the past decade droughts have become more severe and frequent, having a negative effect on all rural HHs and especially those in the arid and semi-arid lands. Among the Semi-arid Marginal Mixed Farming (MMF) areas, specifically Embu, Makueni and Tharaka Nithi counties, the short rain season starts later and the long rains are more unreliable resulting to farmers being either severely or moderately food insecure; and families facing a 3-month hunger gap each year, resulting to adoption of severe coping strategies. Adoption of severe coping strategies have a negative environmental impact, hence the need to strengthen adaptive capacity of local farmers both at household, community and institutional level for sustainable development. The climate risk profiles by CGIAR indicate poor coordination and collaboration for MDAs, creating inefficiencies in climate change institutional capacity; constrained by limited funds and human

resource capacity. (MoALF, 2016), Embu County Climate Risk Profile, pp1; (MoALF, 2018), T/Nithi Climate Risk Profile, pp1.

1.1.2.2. ASALs- Turkana & Marsabit County

Turkana County situated on the North- Western part of Kenya. Turkana is the largest county in Kenya, and covers an area of 77,000 $Km^{2,}$ which is 13.5% Kenya's total land size (CIDP, 2018, Popular Version, pp7). It has a population of 926,976 (Female: 448,868; Male: 478,087)- (KPHS, 2019 vol 1, pp17). It has a temperature range of 24 °C to 39 °C (pp142) with highest temperature being experienced in Suguta valley, along the Lake, Kerio and Loperot in South Turkana (ProWater International, 2012). Turkana lies within Kenya's zone 5, 6 and 7 (ASAL); 65% is very arid, 29% arid, 3% semi-arid and 3% other lands, with low erratic rainfall, 150mm - 550mm per annum (ProWater International, 2012, pp, pp24); Extreme heat and evapotranspiration; ranging from 1400mm- 2600 mm, of which 90% of the land experiences 2000 mm. This has severely aggravated land degradation, accelerated depreciation of forage, drying up of surface water sources, heat stress on livestock, poor crop productivity, and high reliance on food aid for 90% of the population (ProWater International, 2012, pp 56; CIDP 2018, Popular Version pp10). Over 98% of the land manifests desert like conditions, with little or no vegetation, bare rocks, highly degraded soils and sand dunes (ProWater International, 2012, pp 182). The land governance system is communal land, held in trust for the community under the county government Turkana CIDP, 2013-2017, pp205).

Turkana County is highly vulnerable to climate change, as seen in the high severe malnutrition rates and high food insecurity rates in the region. As such, the government and development partners spend a lot of resources on supplementary feeding programmes, which is costly in the long run. For the 2008-2011 period alone, Ksh 6,699.39 million was spent on Acute Malnutrition in Children and pregnant and lactating mothers, the highest cost in 2008 at Ksh 2,543.32, followed by 2011 at Ksh 2,276.30 (PDNA, 2012), pp101. Further, a report by Cities Alliance indicate that the population of Turkana has almost doubled in the last decade, largely due to climate migration, refugee influx, urbanization due to devolution and decentralization of resources and labour migration (Lemuya, 2019), pp7. Turkana is undergoing tremendous development and changes, being part of the Lamu Port, South Sudan, Ethiopia Transport Corridor (LAPSSET) to boost the county's economic growth and regional development integration; and the Lake Turkana Wind Power Projects (LTWPP); and oil and gas exploration but Tullow Oil.

Marsabit County occupies the extreme part of northern Kenya, bordering Ethiopia to the North, Lake Turkana to the West, Samburu County to the South and Wajir and Isiolo Counties to the East, with a population of 459,785 (Female: 216,219; Male: 243,548) (KPHS, 2019 vol 1, pp17). It covers 70,961.2km^2, which is largely an extensive plain between attitude of 300m and 900m above sea level, sloping gently towards the south-east. Arable land accounts for 1,582,750ha, representing 22% of the total land area in the county and about 27% of the national arable land. The total acreage under food crops is 5,060 Ha, representing 0.3% of the arable land (GoK, 2013a, cited in MoALF, Climate Risk Profile (CRP) 2017), which is a gross under-utilization of the county potential for crop production. Land governance is communal except in parts of Saku Constituency around Marsabit, where less than 2% of the farms have title deeds. Eighty percent (80%) of the population is dependent on pastoral production systems, and similarly 80% live in absolute poverty (MoALF, 2018), Marsabit Climate Risk Profile, pp7). The county experiences extreme temperatures between 15^0 to 36^0 Celsius; rainfall between 200mm and 1,000mm per annum; with variation in duration, amount and reliability, rising with altitude. The mean annual rainfall is 700mm for Moyale; 150mm for North Horr and 800mm for Mt. Marsabit and Mt. Kulal, (Marsabit County Climate Mainstreaming Guidelines- DRR Sector, 2018, pp7; CIDP pp 28). Some of the main challenges identified are high poverty (80%), chronic food insecurity (83%), and illiteracy levels, poor infrastructure, dependence on rain fed agriculture, conflicts over natural resources, including water and pasture (MoALF, 2018), Marsabit Climate Risk Profile, pp27).

In Marsabit and Turkana counties, fishing is one of the livelihood activities, providing extra income and supplementing diets for inhabitants. However, fishing is threatened by extreme drought as indicated in the PDNA report due to receding lakes, reduction of size of fish, overfishing affecting the breeding stock, high influx into fishing as a result of crop failure and livestock death (PDNA, 2012, pp123). Loss to fisheries sector during the 2008-2011 drought amounted to Ksh 4163.6 million broken as Ksh 3,661 million in losses, and Ksh 502.6 million in damages and requiring Ksh 4,151.5 million for recovery and reconstruction needs over three-year period (PDNA, 2012, pp116-123). Some of the climate risk factors include exceeding the Livestock holding capacity, water scarcity and natural resource pressure, inadequate and unreliable rainfall, environmental degradation, unsustainable water management practices, (MoALF, 2018), Marsabit Climate Risk Profile, pp 12, 17).

1.1.3. Global Implementation of Climate Change Policy

The *2016 Emission Gap Report* indicated an initial reduction in GHG emissions for the first time since 1980s, but these gains have been reversed by 2% as reported in 2017 Global Carbon Project (Burck, Marten, Bals & Höhne, 2018)*;* further worsening in 2018 (Burck, Hagen, Marten, Höhne & Bals, 2019). Regional commitments to reduce emissions show targets by EU (40% by 2030) with 1990 base year; US (26% to 28% in 2025 with 2005 base year; China (to peak emissions by 2030 or earlier); and no commitment by most countries for 2025-30 (SDSN, 2015). Progress made by different countries in climate governance is highly dependent upon political goodwill and resource allocation, or lack of support and commitment through policy reversals. For example, the US Federal policy reversal on CC in 2017, targeting Obama era CC policies on coal production; withdrawal from Paris Agreement and low government commitment on climate policy (Adler, 2018; Burck et al., 2019,). Noteworthy is that the 56 countries featured in the CC Performance Index (CCPI) account for 90% of Global GHG emissions (Burck et al., 2019) hence they should bear the highest burden for setting ambitious reduction targets and contribution to climate finance for the Non-Annex 1 parties.

In addition, Russia, the 5th GHG emitter globally; and a steel and fossil fuel producer has not ratified the Paris Agreement, and has insufficient national CC policy; largely due to economic interests and opposition from large private sector and interest groups in the country (Davydova, 2016; Burck et al, 2018; Burck et al, 2019). According to Davydova (2016), other factors preventing Paris Agreement ratification in Russia include international relations, and policy reversal following imposition of international sanctions due to the Ukraine conflict, resulting to abandonment of initial GHG and energy efficiency commitments for 2009-2011.

Ireland is one of the highest GHG emitters, ranking 48 out of 56 countries in the 2019 CCPI, up from 49 out of 56 in 2018. It has the poorest performance among the European Union cluster's well-below 2°C compatible pathway in its current level, as well as its 2030 target; and unlikely to achieve the EU effort-sharing 2020 emission reduction targets; due to low targets, and inadequate policy; unlike the other UK countries (Trócaire, 2014; Burck et al, 2018; Burck et al, 2019). Ireland is undergoing litigation by interest groups due to inaction on climate change (Friends of the Irish Environment v. Ireland; Filed 2018, 2019). The advocacy group seeks to compel the Irish government to draft a new CC National Mitigation Plan, arguing that the current plan violated existing legislation and is not ambitious enough to achieve substantial emission reductions by 2050.

Germany has a medium CCPI rating in the last five years (2013-2018), and currently ranks at 27th (2019) down from 22 (2018) index, which is a deterioration. The medium rating is largely due to high score in international diplomacy and CC negotiations; long term strategy (2050) for CC protection anchored on strong long-term goals. This view supported by Karapin (2012), who not only views Germany as the 6th GHG emitter, but as a promising case study for CC adoption based on 26% reduction in GHG emission between 1990-2010. Germany is still on-track to the coal phase-out due in 2019. However, the deterioration is due to low implementation of the government's domestic policies; limited strategy for carbon neutrality by 2050, divergence from the well-below-2°C pathway due to inability to reduce traffic sector emissions since 1990 (Burck et al, 2018; Burck et al, 2019).

Sweden has been identified as a CC Model, having increased GDP by almost 60% over the past 25 years while cutting carbon by 20%; and having consistently remained at position 4 out of 56 in the CCPI for two years (2018/19) (Swedish Climate Portal, 2018; Burck et al, 2019). Note that the top three positions on CCPI remain unoccupied due to lack of exceptional performance by countries. These reports attribute success in linking evidence to policy and practice, bringing together the decision makers, businesses, researchers, and organizations to drive climate change adaptation (CCA). There is also high investment in renewable energy and GHG Emissions reduction, further supported by the National Knowledge Centre for CCA. The common strand among the four top countries in the CCPI; Sweden, Morocco, UK, and Switzerland; are investments in renewable energy, energy use, GHG emission reduction, national and international climate policy.

A joint report by UNDP and *UNFCC The Heat Is On: Taking Stock of Global Climate Ambition*, indicates focus by Annex 1 parties on Long term strategy (LTS) for fossil fuel reduction and increased uptake of renewable energy, while developing nations focus on change in short term strategies for 2020-2030 (UNDP&UNFCC, 2019). Of the 197 UNFCC Parties, 112 countries are revising their NDCs in 2020, and of these, 75 are developing countries. The Paris Agreement expects countries to increase ambition for NDC targets every subsequent five years (UNDP & UNFCC, 2019), but this has failed to happen with lack of concrete consensus in the conference of parties (COP25) in 2019, Madrid, Spain (Carbon Brief, Accessed, 2019). The position-based negotiations slowed progress in COP25, focus being on technical issues like carbon market mechanisms instead of actualization of current plans and climate financing by countries. Slow, long, and tedious process of access to climate finance through the GEF and GCF has slowed

adaptive capacity by countries by countries with more ambitious targets but limited financial capacity. Emission Gap Report (2019) paints a grim picture that even with achievement of the current NDCs, emissions in 2030 will still be above by 38% (Carbon Brief, Accessed, 2019; Burck et al, 2019).

1.1.4. Regional Progress on Climate Policy Implementation

On the regional front, unlike the global front, there is limited documentation and data on climate governance and CC adaptation and mitigation achievements. The CCPI report in 2019 factored four African countries (Algeria, Egypt, Morocco and S. Africa) up from 2 (Morocco and S. Africa) in 2018. Documentation on successes by other countries is either by civil society and development actors, and self-reports by governments. Furthermore, CCA and mitigation interventions fundamentally depend on Annex 1 countries' financing. Reports by UNFCCC, and International Institute for Environment and Development (IIED) indicate that African countries, majority of which fall in the Least Developed Country (LDC) category, are not expected to commit to ambitious GHG emission targets, being least contributors and most vulnerable, with the least capacity to respond to or mitigate to adverse climate shocks (Mathema et al, 2014). This is based on the common but differentiated responsibilities (CBDR) in the Paris Agreement (2015).

Reports by Climate Funds Update (2019); which is a platform tracking global climate finance; indicate that the largest fund is the Green Climate Fund (GCF) having contributed cumulatively USD 875.9M since 2003 to date (2020), followed by Least Developed Countries Fund (LDCF) fund at USD 810M, and Clean Technology Fund at USD 525M (CFU, 2019). While according to UNFCC, 2019 more ambitious targets will be set by 75 developing countries out of 112 countries planning to revise their NDCs in 2020, high dependency on reciprocity by the Annex I parties in honouring climate finance commitments is the downside. Countries need to allocate own resources for climate change adaptation and mitigation even as they seek climate finance at the global front.

In Africa, the largest recipient for climate finance is Morocco. According to a report by Henriech Boll (2018), 49% of the climate finance to Sub- Sahara Africa (SSA) has gone to the top 10 recipients; with S. Africa receiving 12% of the funding between 2003-2018. The Climate Funds Update (2019) shows that Kenya has received USD 101.5 Million cumulatively between 2003-2019 through multilateral funding. Majority was through the Clean Technology Fund (CTF) - USD 60,000M, Scaling Up Renewable Energy Program (SREP)- USD 25,000M; Adaptation for

Smallholder Agriculture Programme (ASAP) and Adaptation Fund (USD 10,000M) each; compared to Morocco (USD, 784M) and S. Africa (USD 516 M). Consequently, Morocco was 2nd out of 56 countries in CCPI index (2019) after Sweden, due to high investments in renewable energy sources and tackling desertification by planting olive groves and orchards of argan trees, to meet the high oil demand (Burck et al, 2019; UNDP & UNFCC, 2019). Morocco is a star performer in Africa and globally, not limited in setting NDC targets by the common but differentiated responsibility (CBDR) approach.

In terms of performance, South Africa has improved in ranking on CCPI 2019, at position 39 out of 56, up from 48 in 2018. The poor ranking is due to un-ambitious targets, heavily subsidizing fossil fuels, lack of coal phase-out plan and dismal implementation of policies, despite performing well in international negotiations (Burck et al, 2018; Burck et al, 2019). A fact sheet by USAID (2012) on *Climate Change Adaptation in Rwanda*, indicates that on the global front Rwanda is not expected to cut its GHG emissions being an LDC. However, due to the high forest cover it serves as a carbon sink due to forest sequestration. Rwanda has developed a policy and institutional framework for CCA, with relevant strategies, plans, and policies including long-term and sector strategies around energy, environment, forestry, land, and economic development. The framework spearheads knowledge management, coordination, and consultations with relevant stakeholders. However, low CC integration in development and other sector strategies and processes remains due to challenges in conducting vulnerability assessments, and lack of clearly articulation in National Adaptation Programme of Action (NAPA) plans to guide policymakers and planners in economic sectors.

1.1.5. Overview of Climate Governance in Kenya

After the 2013 elections, Kenya transitioned to devolved government, with the creation of 47 counties and a separation of power and division of roles between the National and County government. Schedule 4 of the Constitution of Kenya (COK-2010) defines the role of the National government in development of policies and requires counties to adopt those policies within their local contexts facilitating planning, budgeting and implementation. This section is a review of the climate policy framework at national level, which should inform climate governance at county level.

Kenya has been lauded as having one of the most progressive climate policies in the region, as well as globally, (Kibugi, 2018; Munoru & Kamau, 2018). Over the last decade, the Government of Kenya has developed a robust policy framework at national level to give guidance for climate governance and to guide climate mainstreaming in development plans, framed as short-, medium- and long-term actions. County climate policies and development plans are supposed to be aligned to the Vision 2030 goals and flagship projects. But to do so effectively they have to be framed as a development challenge and not as mere environmental issues, based on structural vulnerabilities of target communities upon which government MDAs and development partners can align and support (MoDP, 2015; Kibugi, 2018).

Article 2 (5) and (6) of Kenya's Constitution (2010) states that "Any treaty or convention ratified by Kenya forms part of the law of Kenya", while Article 21 (4) of the Constitution imposes on the State the obligation to enact and implement legislation to fulfil its international obligations. Climate governance is supported through adoption of 'best fit' policies, starting with the development of the National Climate Change Response Strategy (NCCRS) 2010; which seeks to promote sustainable development through adoption of climate resilient and low-carbon pathway. The National Climate Change Response Strategy (NCCRS)- 2010 is operationalized through five-year National Climate Change Adaptation Plans (NCCAPs). The first was developed for 2013-2017 (now obsolete), followed by 2018-2022 NCCAP, in tandem with the coming into force of the devolution process in 2013; as well as other relevant county and national level strategies and plans like the County Integrated development plan (2013-2017; 2018-2022); the national Medium-Term Plans (MTP: II-2013-2017; MTP III: 2018-2022).

The National Climate Change Framework Policy, 2016 and Climate Change Act of 2016 provides an over-arching policy framework and CC priorities; and establishes National Climate Change Council, and Climate Change Directorate (CCD), hosted in the Ministry of Environment and Forestry (MEF). The CCD coordinates national climate change plans, actions and operations (reporting to the National Climate Change Council). The Act establishes the Climate Change Fund, enabling a CC financing mechanism. The National Adaptation Plan (NAP) 2015-2030 provides a climate hazard and vulnerability assessment and sets priority adaptation actions in the 21 planning sectors in MTP II.

These policy instruments articulate climate adaptation and mitigation priorities for the country and estimated financing requirements. NCCAP 2018-2022 provides a framework to achieve

Kenya's 5-year NDCs, CC mainstreaming in sectors at National and County Levels, alignment for CC into development agenda, including the Big 4 Agenda, and to promote participation of the private sector, civil society, and vulnerable groups (NCCAP 2018-2022). The National Climate Finance Policy, 2017 seeks to establish a climate finance governance framework through efficient and transparent national financial systems and institutional capacity to effectively access, manage, and report on climate finance. This is expected to be domesticated at the county level, for counties to establish mechanisms for tapping into climate finance, for reporting and accountability of the funds.

The National Drought Management Authority (NDMA) Act, 2016, established NDMA whose core mandate is overall coordination of Ending Drought Emergencies (EDE) Sector Plan (2013-2017; 2018-2022). The EDE: Common Programme Framework (CPF) 2015 recognizes the importance and divergence between development and humanitarian interventions; thereby giving precedence to institutional strengthening, capacity building, and promotion of drought resilience. This is through drought risk vulnerability reduction, early warning, and early action in key sectors (Min. of Devolution, 2015). The EDE framework focuses on the ASALs, with a population of 15 million, across 23 counties, accounting for approx. 36% of total population of Kenya. The "EDE: Common Programme Framework (CPF) for Climate-proofed Infrastructure (2014-2020)" enables alignment and coordination of drought risk reduction and risk management investments between the National Government, the County Governments and Development Partners. The EDE-CPF 2015 is implemented through six pillars; Pillar 1 - Peace and Security; Pillar 2 - Climate-proofed Infrastructure; Pillar 3 - Human Capital; Pillar 4 - Sustainable Livelihoods; Pillar 5 - Drought Risk Management; and Pillar 6 - Institutional Development and Knowledge Management; actualized through annual action plans that are developed with specific tasks for national and county levels.

The Kenya Vision 2030 is implemented through medium term plans (MTPs) at the national level, and five-year *County Integrated Development Plans (CIDPs) at the county level*, which are then supposed to factor the long-term development strategy on climate change policy adoption. Therefore, this study examines the status of county adoption of national level policies on climate governance in select counties in Kenya.

1.1.6. Natural Resource Management and Transformative Sector Strategies in Kenya

There are a number of strategies in respect to forestry and natural resource management, sustainable agriculture and green energy in Kenya. These are core to CC adaptation because NRM, energy and sustainable development are at the centre of climate action. These *include Article 186 (1) of the COK-2010:* it provides for the distribution of functions and powers of National and County Government; with National Government bearing the responsibility of environment and natural resources protection, Energy policy including electricity and gas reticulation and energy regulation and Public investment. The County Governments are mandated to spearhead county planning and development including electricity and gas reticulation and energy regulation. Further, Article 69 provides for sustainable exploitation, utilization, management and conservation of the environment and natural resources, and ensure equitable sharing of the accruing benefits; sustaining a 10 percent tree cover of the land area of Kenya, environment protection and sharing benefits accrued.

The County Governments Act (2012) section 110(1) provides that County Spatial Plans shall guide county planning and development; and be implemented through lower-level plans including CIDPs, sectoral plans and integrated urban development plans. This includes taking into account sustainable development and environmental protection considerations as envisaged under Constitution Articles 60 (effective, equitable, productive and sustainable land use); Article 66 (land use regulation), and Article 67 (monitoring and oversight). Despite the fact that the land governance guidelines that came into effect with the new constitutional dispensation in 2010, and with devolution in 2013; only few counties: (Lamu County (Lamu County Spatial Plan , 2016-2026), and Makueni counties (Makueni County Spatial Plan , 2019-2029), out of all the 47 counties have managed to develop county spatial plans, as at August 2019. It is prerequisite that counties develop 10-year County Spatial Plans to guide development planning, including the development of the CIDPs, but at the point of the development of the second generation CIDP (2018-2022), only Lamu County had theirs in place.

National Land Policy, 2009 aims to safeguard property (land ownership) rights, and *Community Land Act 2016* to guide the management of community land rights, including documenting, mapping, and developing of the inventory of community land; and issues of control, benefiting from natural resources and ensuring sustainable and productive use, to safeguard access and benefits to future generations. The *Kenya Strategic Investment Framework on sustainable land management (KSIF)* is the guiding framework for investments, interventions, and actions on

sustainable management of natural capital to enhance ecological support functions of the land resources, (MENR, 2016). *National Environment Action Plan Framework (NEAP, 2009-2013):* is an obsolete framework that sought for private sector and government synergy in environment and improved resources management (GoK, 2009). *The Kenya Forestry Master Plan 1995-2020:* seeks to promote forestry development and established the basis for forest sector laws and reforms, and targets for tree planting and forestry development within specified timeframes.

Agricultural Sector Transformation and Growth Strategy (ASTGS 2019-2029: focuses on agricultural transformation and will be implemented in collaboration with 5-year National Agriculture Investment Plan (NAIP). It sets priorities for private sector involvement, and evidence-based interventions that empower farmers to improve food security and secure livelihoods while addressing adverse effects of CC. The *Kenya Climate Smart Agriculture Implementation Framework, 2018-2027 (KCSAIF)* was developed to support the agriculture sector adopt a climate resilient and low carbon growth sustainable agriculture in-line with the CC policy targets. *Agricultural Sector Development Strategy (ASDS) 2010-2020*: seeks to attain food security and agro- forestry, recognizing the adverse effect agriculture sector can have on tree cover.

Kenya National Energy Efficiency and Conservation Strategy, 2020 seeks to promote adoption of energy efficiency and affordable technologies; recognizing the private and manufacturing sectors have experienced suboptimal energy efficiency because of limited information, low motivation, expertise, and access to finances for adoption of innovative technologies. The target is reduction of fossil fuel consumption and subsequent reduction of GHG emissions, focusing on five thematic sectors: households, buildings, industry and Agriculture, transport, and power utilities. The *Gender Policy in Energy, 2019* uses a gender and sustainable development lens to guide the energy sector in transitioning to the implementation of the *Energy policy (2019)* and *Energy Act (2019).* It highlights access to sustainable energy as core to achievement of SDG 7 on access to affordable, reliable, sustainable, and modern energy for all; SDG 13 on climate change and its impacts; and SDG 1 to end poverty and hunger. The *Energy Act, 2019* obligates the government to provide affordable energy services through electricity connectivity by 2030, and to promote the development and use of renewable energy technologies. Further, following devolution, the Energy Act_2019 mandated county governments to develop County Energy Plans (CEP) to meet their county energy requirements.

In conclusion land, energy, forest and environment protection policies are core to ability of individuals and communities to invest in land augmentation practices like agro-forestry, development of soil and water conservation structures. The common strand among the four top countries in the CCPI; Sweden, Morocco, UK, and Switzerland; are investments in renewable energy, energy use, GHG emission reduction, national and international climate policy.

1.2 Problem Statement

Tanner and Allouche (2011) argue that political economy of climate governance contributes to climate inaction due to complexity of interests and actors, rent-seeking behaviour due to climate finance and resource transfer. Further, there is heavy focus on policy process, and solutions are framed through a technical or managerial lens ignoring the political nature of such issues. For Kenya, policy development capacity is strong at national level, but challenges emerged for policy domestication and diffusion, with the tendency to copy and paste documents wholly, without deliberative democracy (Lakin, 2015). The national level climate governance frameworks identify CCA and mitigation priorities, and financing needs for the country at national level. Furthermore, there is high reliance on external climate financing to achieve the NDCs both at national and county level. At sub national level, very few counties have been able to articulate or demonstrate how they will integrate CC interventions into their development planning.

So far, only 5 out of 47 counties in Kenya- Isiolo, Garissa, Kitui, Makueni and Wajir have developed County Climate Change Fund legislations (PACJA, 2018; Orindi & Murphy, 2018). The success for implementation of the Kenya NCCAP depends on evidence-based policy implementation. However, without a strong coordination mechanism and a central monitoring, evaluation, learning and reporting system, the country is likely to under or over report actions by MDAs and other stakeholders on CCA and mitigation actions. These challenges and information gaps are wide and diverse given that there are 47 counties, each with different needs, capacities, and structures.

Kenya has ratified various global treaties and protocols, and has set targets under the NDCs, and without clear planning and allocation of resources, it is highly unlikely that the targets will be achieved. Gaps exist in terms of what are the existing capacities, incentives, enabling factors and barriers for counties to adopt climate change policies. Specifically, there is limited research to guide climate governance in the Kenyan context as well as regionally. The CCPI report in 2019

factored four African countries (Algeria, Egypt, Morocco and S. Africa) up from 2 (Morocco and S. Africa) in 2018. Documentation on successes by other countries is either by civil society and development actors, and self-reports by governments.

According to a review report by NEPAD, there are a total of 89 policies and strategies relating to sustainable land management (SLM), with overlap in jurisdictions and duplication of efforts across MDAs (Mati, 2016). The report further states that where in some cases there are mentions on interventions like water conservation/harvesting, there was no corresponding resource allocation to facilitate their implementation. It points at policy gaps, since policies haven't been harmonized to reflect devolution in 2013, or to ensure coherence with the Vision 2030, MTPs and the new COK-2010. The report defines the laws, policies, strategies, and institutions as a "*complex web relating to agriculture, land, water and ecosystems and energy*" (Mati, 2016), pp.35-36). While it is necessary to have policies and strategies in place, policy coherence, resource allocation, and collaboration in operationalization of policies translates to optimal outcomes.

1.3. General objective

To review climate governance frameworks, structures and climate integration in development planning in select counties in Kenya.

Specific objectives

i. To analyze the extent of county adoption of Climate Change policies in select counties in Kenya.
ii. To evaluate the existing governance structures in counties for adoption of national level policy on climate change.
iii. To assess the capacity of county governments in adoption of climate change policies.

1.4. Research questions

i. What is the extent of county adoption of national level policies on climate change?
ii. How are the existing governance structures enabling the adoption of national level policies on climate change?
iii. What is the capacity of the county governments to adopt national level climate change policies?

1.5. Scope of the Study

The study focused on five counties (Embu, Tharaka Nithi, Marsabit and Turkana Counties), and was limited to 2010 to 2020, to coincide with the promulgation of the new constitution and

devolution phase. The rationale for the selection of the counties was purposive based on select counties involved in climate governance projects, and variation of arid and semi-arid (ASALs) regions which are in most dire need for climate adaptation and mitigation interventions. It involved review of policies and laws, and budgeted strategies that exist at the county level in comparison to National level documents, as well as primary data collection on other aspects of the study. Other key guiding documents reviewed include specific CIDPs, Kenya Vision 2030, county specific policies, County Budget Review and Outlook Paper (CBROP), Annual Development Plans (ADPs) and other relevant documents available on county websites or from development partners.

1.6. Significance of the Study

This study sought to identify county specific information that can be used to inform climate governance frameworks and capacity strengthening mechanisms. It will act as a baseline for conducting climate governance interventions in target counties and to inform strategies and priority action areas by governments, civil society, and development actors. It will inform various policy makers and stakeholders on key challenges and opportunities that exist in climate governance at the county level. The study will also inform the way forward for development actors seeking to influence climate policy adoption institutional capacity strengthening in climate change governance. It will facilitate counties to adopt CC interventions and mainstream CC in development planning, as well as give highlights on how counties can tap into climate finance and contribute to NDCs through strengthened CC governance. Communities will benefit from improved climate governance through increased resilience and strengthened adaptive capacity. The study will contribute to the body of academic knowledge on climate governance in the global south, though learning from the Kenyan context. It builds up on theoretical knowledge on political economy and systems theory with regards to climate governance, with an argument for need to understand interests and incentives of different actors, and how to strengthen the different components of a complex governance system.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The purpose of this review is to identify and assimilate literature on the theories policy design, implementation, public engagement, and governance. The literature review is limited to published books, articles from academic journals, policy briefing notes, previous research, legislation, and publicly available information from organizations including governing bodies at national and global level, involved with climate change (CC) Governance. It indicates that to objectively analyze issues of climate governance, not only legal and regulatory frameworks are examined, but also a critical review of institutional capacity to carry out core functions, the role of non-state actors, including the private and development sector, and coherence between climate and sustainable development agendas. This chapter discusses the theoretical perspectives of climate governance and gives an analytical framework for the study.

2.2. Theoretical Foundations

For this study, two main theories identified are the political economy theory, and the systems theory all linked to classical (institutional/ government), elite (influential groups) and systems (interrelated forces) theories used to select a range of optimal policy outcomes (Cloete & De Coning, 2016). The overarching theory that takes cognizance of the interrelationships between these theories is the Political economy theory.

2.2.1 Political Economy of Climate Change and Development Theory

This theory by Tanner & Allouche (2011) posits that political economy is *"the processes by which ideas, power and resources are conceptualized, negotiated and implemented by different groups at different scales"*. It focuses on the interrelationships of the social, political and economic factors that surround CC policy process and outcomes, highlighting dominant factors as power in the negotiation phase; and resource, institutional capacity and governance in implementation phase. It emphasizes governance and negotiations, resource allocation, interactions between different stakeholders in government ministries, departments, and agencies (MDAs), community and environmental groups, as well as the private sector actors as core to policy outcomes. Climate policy defines the struggle to find a balance between sustainable development and economic

interests of states as defined in the Sustainability theory by (Harrington, 2016); while recognizing the fact that most affected are the poor developing nations, at global level while they contribute the least to GHG emissions; (Mathema, 2014; Trócaire, 2014; Todaro, 2015). At the national level, poor households suffer more adversely from the impacts of climate shocks, while decisions to address CC and allocate resources for climate governance are made by duty bearers and elites as in the elite theory; failing to involve the most affected in decision making.

This theory shifts from classic environmental theory defined by state-focused politics and incorporates political ecology by Byant and Bailey (1997) to take cognizant of non-state actors (NSAs) in the policy process. The political economy postulates that decision-making, policy formulation and implementation process is complex and multi-sectoral; driven by incentives, power relations, and ideologies especially due to climate finance and rent seeking that comes with it. The complexity of climate governance is in the different levels of negotiations and implementation, flowing between international to national and sub-national level. For instance, global level recommendations might not be applicable at grassroots level, given technical, technological and resource capacity constraints; and must be renegotiated at those levels.

This theory is useful in this study to understand how different stakeholders influence the policy process; how power relations affect policy priorities; and how institutional capacity contributes to policy adoption and diffusion, resource allocation as well as implementation. In essence, the theories call for a good understanding of who is called to the table to discuss environment or climate governance issues; as well as understanding their roles and responsibilities, legitimacy to discuss such issues, their power and interests, and their capacity to do so. The theory is also relevant to this study to understand how political, social and economy interests drive international cooperation around NDC targets, climate financing and technical support for technological transfer, and best practice sharing and learning.

2.2.2. Systems Theory

Systems theory explains complex systems across a continuum, without prescribing specific interventions for social problem; (Anderson, Carter, & Lowe, 1999); but provides a metatheory for understanding complex social problems (Meyer, 1983) cited in Friedman and Allen (2014); to interpret problems and develop balanced strategies for best-fit solutions (Friedman & Allen, 2014). It highlights the contribution to policy outcomes by parts of an ordered system, laying emphasis to contribution to the success of the whole continuum by different actors, and iteration

of policy over time (Wildavsky, 1979:16; Pollit, Lewi & Negro, 1979:10; Hanekom, 1987:8;) as cited in Cloete & De Coning (2016). This theory is relevant to this study, in that it seeks to give policy adoption a three sixty degrees review, focusing not on just one aspect of the policy, but rather the interconnectedness between the policy document, the processes, governance issues and the policy outcome. It then follows that the failure of one part can adversely affect the effectiveness of other parts in delivering the overall anticipated outcome.

This theory explains both cause and effects of a given situation, in order to identify optimal solutions to address them (Friedman, 2014) pp.17-19). For example, why there exists so many policy recommendations for CCA and mitigation at global level, but they have failed to achieve much in terms of reduction of GHG emissions on the global and national scale. This is given that outcomes are influenced by the environment and context in which they are meant to be implemented and are dependent on highly interconnected systems that influence one another; positively or negatively. For successful policy adoption, local contexts, technical, technological, human, and financial capacities, and governance structures for the national and sub-national actors should be reviewed. Additionally, assessment of capacities, scope, and legitimacy of other actors in the climate governance continuum should be conducted. Policy coherence is another underlying factor of success in this system, between government sectors and national and subnational levels.

2.3. Empirical Review

2.3.1. Political Economy and its Influence on Climate Governance

The role of international climate governance institutions is defined as signalling governments to adopt climate policies while providing governance and rules, enhancing transparency and accountability on NDCs, capacity building and technology transfer and push for country specific targets, (Oberthür, Hermwille, Khandekar & Obergassel, 2018). Sapiains, Ibarra, Blasco, O'Ryan, Blanco, Moraga & Rojas (2020) identify power relations and political economy issues in Global South, perpetuated by deep inequality and asymmetric power relations as drivers of climate inaction. These are aggravated by low climate preparedness, lack negotiation skills and bargaining power, (KPMG, 2019, pp17&26). While climate policy adoption and CC mainstreaming in development planning is widely recognized as central to climate governance (Oulu, 2011; Worker &.Northrop, 2018) , evidence shows that economic interests of states override the global climate governance targets, preventing adoption of CCA and mitigation strategies (Stadelmann, Castro & Michaelowa, 2011; Davydova, 2016; Johnson, Wanjiru, Ogeya, Johnson, vanKlaveren, & Longa,

2017). Studies on political economy of climate change reiterate that an understanding of power differentials, incentives, and climate finance is crucial; and issues can be addressed through policy problem framing, changing attitudes and norms to induce political support through policy coalitions (Naess, Newell, Newsham, & Phillips, 2015; Worker, 2016; Laakso et al, 2017 p. 10) cited in Sapiains, et al, 2020).

Meadowcroft (2013) examines how "institutional inertia" hampers timely and effective climate action. He argues that governments tend to delay action, and adopt less ambitious climate programs, due to avoidance of conflict from groups opposed to climate policies, unforeseen policy consequences, scientific uncertainty, complex and time-consuming global negotiations, (Meadowcroft, 2013). The paper highlights the centrality of conflict and interests in climate policy, pointing out government's role in formation of policy coalitions, establishment of new centres of economic power and shifts in interests and perceptions. Policy incoherence, unambitious targets, and policy reversals are also key challenges in the policy process identified through studies and sector reports. Weible and Elgin (2013) emphasize the need for governments to factor sustainability, considering distant benefits; localized and immediate costs; while also taking note of the contrasting market-based priorities, which often contrast environment programmes and policies.

These studies emphasize how political economy and priorities of various interest groups often overpower environmental protection limiting climate action. They contribute to this study through highlighting the need to identify enablers and barriers to climate action at the county level, and how lessons can inform development partners working around climate governance frameworks, development financing and institutional capacity strengthening. They support the systems theory, in that climate governance is a function of many moving parts, and political economy theory in that interests and power determine resource allocation, policy priorities and policy implementation. They further emphasize the role of other actors in climate governance, and the need for recognition and active inclusion in policy process in holding governments accountable on their commitments. The studies highlight knowledge gaps for governance structures in newly devolved systems to identify opportunities for strengthening climate governance systems, considering global and national climate governance laws and policies are less than 15 years old, and adaptation needs remain urgent (Worker & Palmer, 2020).

The critical question to ask however is why there is slow adoption, policy diffusion and action towards the agreed targets, with limited progress on the Paris agreements by the governments and other development and private actors? Who are the policy stakeholders and what are their interests and levels of influence? What are the enablers and blockers of policy proposals? This study sought to analyze policy adoption and institutional arrangements for policy management and engagement at macro level (national and global level), meso level (county government and intergovernmental level); and micro level (community governance structures), and how they influence decisions across all levels (Cloete & De Coning, 2016).

2.3.2. Climate Governance Structures for Policy Adoption and Implementation

Climate governance is the rule-making and decision-making mechanisms and modes within a given system or society that determine how institutions' interests are articulated, coordinated and negotiated, (Worker & Northrop, 2018). It defines how institutions and communities govern access to, control of, benefit from and ensure sustainable management of natural resources. Climate governance is the process through which public and private actors address collective issues, (Termeer et al., 2016, p. 12) cited in (Sapiains, et al., 2020); through formal mechanisms (laws, regulations, and policies), (Hurlbert & Gupta, 2016, p. 339); or informal mechanisms (incentives, rule, norms and social structures), (Edenhofer et al. 2014). Cited in (Worker & Palmer, 2021). It interrogates political social and economic processes that support climate change adaptation and mitigation from a right's-based and sustainable development perspective, critically analyzing power relations in climate finance negotiations, commitments to NDC targets and financing obligations. Sapiains, et al (2020) opines that inequality and asymmetric power relations, rising environmental conflicts, and a lack of adequate mechanisms for community participation characterize climate governance in the Global South.

Weible and Elgin (2013) while citing Dietz, Ostrom, and Stern (2003) and Lutsey and Sperling (2008) underline importance of local governance (rules) for CC adaptation and mitigation, and its opportunity for policy experimentation, and for best-fit policies based on local priorities, capacities and needs. Nyajom (2011) characterizes decentralization at three levels; administrative, political and fiscal, where it can occur jointly or independently. Administrative decentralization transfers responsibility of functions from a central agency to one or more of its lower levels internally, or to peripheral agencies. Political decentralization separates powers and responsibilities horizontally or vertically; fiscal decentralization involves changing revenue generation responsibilities and grants expenditure autonomy (Nyanjom, 2011). As in the case of

Kenya, devolution is viewed as an opportunity for deepening democracy, as well as increasing service delivery to the periphery; giving devolved units opportunities to engage in problem identification, policy formulation, planning and resource allocation, implementation, and policy evaluation. This paper highlights some of the challenges of devolution as elite capture, transfer of inefficiencies, weak or non-existent subnational institutions, citizenry ignorance and low participation power and deepening inequalities, especially in relation to public participation or control.

According to Brown, Hammil & McLeiman (2012) UNFCCC's policies have largely taken a top-down approach, while decentralization offers an opportunity for vertical and horizontal integration that allows locally-led or bottom-up initiatives. UNFCC policies can influence national action, while enabling frameworks at sub-national level empower local players, supporting the Corfee-Morlot and Cochran's (2011) concept of multilevel risk governance, (Brown, Hammil & McLeiman, 2012). This paper further shows the complementarity of both approaches one in giving direction and strengthening capacity, while the other one ensures contextualization of policies and interventions with a strong public participation model. These papers are relevant to this study pursuant to an in-depth understanding of the roles and responsibilities of the different levels of government and other actors in the policy process, as well as the enabling factors to policy formulation, implementation, and outcomes. They inform this study in the sense of what are the existing structures for governance that promote public participation in climate governance, allocation of resources based on vulnerability assessments and community priorities.

2.3.3. Institutional Capacity (Human Resource, Technical)

Climate governance is complex, multi-dimensional and multi-sectoral, touching on technical and technological skills and capacity, financial and human resources, policy influencing and political elements of climate change. It involves inclusive and participatory decision-making processes in the exercise of power and legitimacy through transparency, accountability, fairness, equity and effectiveness; and through the right mix of strategies and tools, and sustainability proposed policies and actions, (Heinrich Boll Foundation) p1. Adoption and implementation of policies involves careful application of the scoping and design process with a coordinated, coherent, and effective response to the local, national and global challenges and opportunities. It requires a strong and participatory stakeholder engagement and concerted effort; assessing and enhancing capacity of the people tasked to rollout the policies; and assessing capacity to rollout, monitor, evaluate and improve the policies (UNDP, 2004; MENR, 2016).

Cloete & De Coning, (2016) p244 define institutional capacity as elements of policy analytical capacities for government and non-government actors, presence of statutory and regulatory frameworks, levels of engagement, consultation, and collaboration of actors in systems contexts In addition, human resource development and capacity building, leadership and management including political goodwill and support for the policy process are central to institutional capacity to deliver mandates. Oberthür et al (2018) emphasizes the complexity of climate governance, further challenged by lack of clarity of roles and enforcement capacity for national agencies, particularly in less capacitated countries. This is further supported by other studies which identify institutional capacity as financial and human resources, clear mandates, incentives that match expectations, leadership and oversight to prevent corruption (Worker, 2017) p38 and ability to address conflicting interests and financial demands from different programs with limited resources (Weible & Elgin, 2013).

Transformative climate governance studies recognize adaptive capacity as core to climate governance, involving risk anticipation and mitigation; capacity to recognize and reduce drivers of unsustainability and mal-adaptation, innovative alternatives; and capacity to foster synergies (Hölscher, 2020). Similarly, transformative governance should be underpinned in strengthening of governance capacities that create institutional space for sustainable climate interventions, championing new narratives and mobilizing social and political capital, (Westley et al. 2013; Brown et al. 2013; Olsson et al. 2006) as cited in (Hölscher, 2019). Weible & Elgin (2013) argue that institutional capacity is more associated with the use of analytical techniques (such as modelling and economic analysis), policy priority and capacity (adequate knowledge, skills, and people to respond to climate-related issues), as well as pro-climate change beliefs. They add that individual level capacity e.g. formal training provided little explanatory power in the advancement of the policy participation models while advanced degree was positively associated with policy engagement, (Weible &Elgin, 2013), pg14. They identify gaps in more detailed research on quality of trainings, and types of policy coalition networks or existing governance structures.

2.3.4. Development Planning and Climate Mainstreaming Capacity

Development planning and climate mainstreaming capacity are salient features in climate governance success; however, climate finance non-commitment poses a threat climate action (Klein, 2010; Oulu, 2011). Shipan et al (2012) opines that most policy diffusion studies focus on policy adoption stage of the public policy process creating a gap on whether the policies were

implemented; a sentiment supported by Oulu (2011) highlighting lack of climate mainstreaming studies in developing countries. In a systems approach of policy analysis, the whole policy continuum should be analyzed, recognizing that policies are not an end in themselves, and require financial and resource capacity for their implementation. An analysis of institutional governance capacity should review efforts for strengthening support to governance actors to formulate action-oriented guidelines and recommendations for climate actors. Capacities are strengthened through utilization of policy toolkits, training for policy champions, and support for public- private participation through creation of policy coalitions that can negotiate trade-offs between economic and sustainable development goals. Focus should be on institutional not individual capacity.

Identification and scaling up of best practices should be encouraged through contextualization, and replication of climate interventions by orchestrating multi-stakeholder coordination capacity (Ehnert et al. 2018; Smith and Raven 2012 cited in (Hölscher, 2019). Studies on climate governance utilised qualitative comparative case study methodology an approach that utilises evidence to draw conclusions and inform a governance analytical framework for future studies. These studies are relevant as they identify the need to analyse local governance structures, and if they have common reference points and strategies to inform concerted action based on solution-oriented approaches, (Hodson & Marvin 2010; Loorbach et al. 2015; Hölscher, 2018 cited in Hölscher, 2019), informed by climate vulnerability assessments (CGIAR, 2020). Tanner & Allouche (2011) identify gaps in research, on the extent of donor-recipient engagement in design and implementation of CC and development programmes; in the context of climate finance. They however argued that it was too early (in 2011) to examine issues related to governance and institutional capacity, especially at the national level, but they underline the need to query policy operationalization and how it is affected by existing governance models. However, the global and national urgency for climate interventions given the high cost of climatic shocks require that policy be evidence based.

2.3.5. Technological Capacity

Technological transfer is defined as "*broad set of processes covering the flows of know-how, experience and equipment for mitigating and adapting to climate change,"* (UNFCC, 2000). These environmentally sound technologies can be found in different sectors like agriculture, transport, energy and manufacturing. For instance, in the Kenya Flower Cluster, investment investments include computerized drip irrigation, fertigation systems, and greenhouse ventilation systems, heating, cooling, and waste management systems, lighting systems to increase day

length, (Ogallo, 2015). Capacity also includes ability to integrate local indigenous mitigation and adaptation technologies, (UNFCC, 2000). The Kenya Vision 2030 and National Climate Change Action plan (2015-2030) articulates the need for adoption of a low carbon development pathway. This can be achieved through public private partnerships between the government and private sector, and with climate finance. The capacity for this is dependent on policy support, ability to link potential investors with climate investment partners financing models and sensitization of the different sectors to adopt relevant technologies.

Challenges in technology transfer include low knowledge and capacity levels, information asymmetry .e.g. existence of technology, and lack of full cost pricing; existence of trade and policy barriers (not climate friendly); high costs of investments, limited private sector investments in low carbon technologies as a result of technology costs, high investment risks, low access to finance, (UNFCC, 2000; Stadelmann et al (2011), Oberthür et al, 2018). Stadelmann et al (2011) drawing on evidence from Peru and Vietnam case study argues for the role of private sector in achievement of GHG reduction targets. This is given that implementation of all planned public policies and international support programmes (public finance and carbon market) would only achieve 10-15% of the abatement potential by 2020 in these countries (Stadelmann & Eschmann, 2011; Tatrallyay & Stadelmann, 2011), cited in Stadelmann et al, 2011).

Johnson et al (2017) describe the friction between the need for economic development, supported through quick wins using high carbon energy pathways; and that of sustainable development, supported through low carbon energy pathways. The paper talks broadly on ways to reduce Kenya's carbon emissions, in-line with the NDCs set out in the Kenya Climate Change Action Plan (2013). According to the study, challenges with the implementation of the low carbon pathways go back to the environmental governance challenges of political interests, industry preference, high initial cost of capital investments; resistance from public due to perceived lack of benefits; as well as displacement from land in the case of large-scale investments, especially in renewable energy projects. Egute, Albrecht, & Ateghang (2017) explored awareness and technological capacity for renewable energy and indicated shortage of a trained workforce to install and conduct maintenance of equipment as a key adoption barrier for developers in Cameroon. Egute et al (2017) further identified low foreign direct investments (FDI), limited trade opportunities and limited capacity for renewable energy deployment; lack of financial incentives like long-term loans and tax incentives in Cameroon as barriers for technology transfer.

Kim, J. E. (2018): accesses capacities for clean technologies transfer to the Global South and highlights technical cooperation through development actors as salient in the successful knowledge and skills. The study utilized an empirical model to estimate long-term effects of foreign-aid disbursements for non-hydro renewable energy (NHRE) projects. Results indicated that with hands-on cooperation, and long-term incubation period there was increased effectiveness of technology transfer channels for clean energy. To address knowledge issues, the countries have initiated national and international knowledge and capacity initiatives like Cleaner Production Centre and Clean Development Mechanism (CDM).This paper therefore emphasizes the need to demonstrate linkages from national to global level to strengthen capacities to deal with climate change, as well as for knowledge exchange and technology transfer.

2.4. Research Gaps

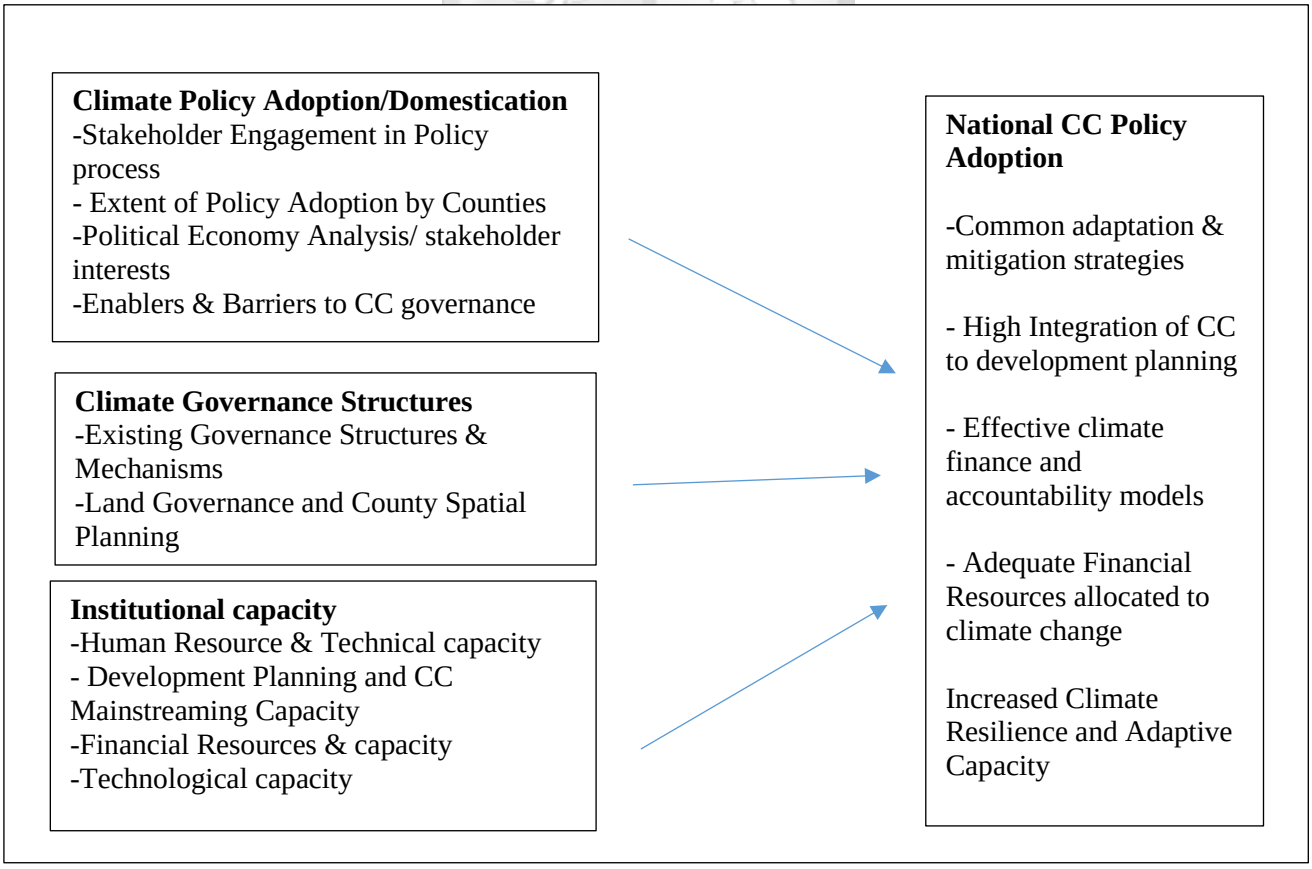
Through review of literature, informational gaps have been identified on existing county level climate governance institutional structures and their capacities for implementation. Most available literature is at national level but lacks in most counties especially on extent of domestication of policies and strategies; and /or existence of climate change units/ departments in counties and MDAs. Climate policy development is fairly new, and domestication of policies in counties started after the 2013 devolution period in Kenya, guided by Schedule 4 of the new Constitution of Kenya (2010). However, there has been no structured way of documentation of existing structures and policy frameworks.

Gaps exist on barriers and enablers to climate action in counties, and how existing structures and institutions and political economy drives climate policy development, resource allocation, policy implementation and technological transfer. It is unclear how or what priorities are set for the various policies to be developed by counties, and who drives the policy process. Further, there are gaps in research, on the extent of donor-recipient engagement in design and implementation of CC and development programmes; in the context of climate finance. To understand governance barriers and successes, there is need to query policy operationalization and how it is affected by existing governance models. Therefore, this study seeks to establish how governance and capacity issues can be fast-tracked for efficient CCA and mitigation interventions, and to meet NDC targets by the country through strengthening county climate governance frameworks.

2.5. Analytical Framework

The framework of analysis of the policy focused on policy formulation and adoption for the 2010-2020 period post promulgation of the new constitution in 2010, and devolution in 2013. The framework *(Fig 1 below)* is iterative, not linear, with interactions between policy processes at national and subnational level, guided by existing governance structures and supported by various institutional capacities for optimal policy outcomes. It's anchored in the systems theory, where different parts of a system must be functional to deliver optimal results. Further, the review of climate governance models was guided by World Bank's three principal levels for Political economy analysis (PEA); county-level analysis, of climate governance structures and frameworks; main political economy drivers by reviewing what have been the enablers and barriers to climate action in target counties, (World Bank 2009: 23–4) cited in Tanner &Allouche, (2011). This was further supported by sector and thematic analysis, to review level of integration of climate change in development planning and budgets in line with the UNFCC priority areas. The capacity analytical framework is based on proxy indicators in the policy development and operationalization through development planning and resource allocation, evidence of operational governance structures, disaster risk reduction and drought resilience interventions by counties.

Figure 2.1. Analytical Framework



2.6. Operationalization of Variables

Table 2.1 Operationalization of Variables

Variable	Definition	Indicator/ measurement	Reference
Climate Policy Adoption /Domestication			
-Stakeholder Engagement in Policy process	Governance guiding principles and values (fairness, transparency, and co-participation)	**Qualitative review** of perceived levels of public participation in policy process, e.g. policy agenda setting, public finance processes *(e.g. use of KII quotes)*	Sapiains, et al., 2020, p.4.
- Extent of Policy Adoption by Counties	Domesticated climate change policies and strategies: *Which national level policies have been domesticated*	**Likert Scale**- 1 to 3 (Adopted, adoption in Progress; or not adopted) List of specific County Level Policy where available.	KNAP (2015-2030) NCCAAP (2013-17;2018-22)
-Political Economy Analysis/ stakeholder interests	Process in which ideas, power and resources are conceptualized, negotiated and implemented; or ways in which public/ private actors articulate their power, interests, to influence laws, regulations, and government policies	**Qualitative review:** of political and socio-economic interests and incentives, that govern climate action and climate finance support Review of political economy drivers by reviewing what have been the enablers and barriers to climate action in target counties	Tanner &Allouche, 2011; (World Bank 2009: 23–4) Termeer et al., 2016, p. 12; Hurlbert & Gupta, 2016, p. 339 cited in (Sapiains, et al., 2020)
-Enablers & Barriers to CC governance	Factors that contribute to or inhibit climate policy development/ domestication/ implementation	**Cases study review** from target counties e.g., development support, existing toolkits, or trainings offered to county staff to strengthen capacity	County websites and reports on climate/environment governance
Climate Governance Structures			
-Existing Governance Structures & Mechanisms	Review of existing governance structures at the micro (county), meso (subcounty) and micro (ward and village) levels.	**Descriptive Analysis**: Selection of institutional & governance structures by county from a predetermined list.	Additional review: Stage in setting up system These are named differently across the counties (specific names put where they are different from the one on the list).
-Land Governance and County Spatial Planning	Existence of County Spatial Plans/ policies/ strategies to guide development planning, including the development of the CIDPs	**Descriptive Analysis**: Availability of spatial plans; if already developed, under development or planned for.	Constitution of Kenya (2010) Articles 60; Article 66, Article 67; County Governments Act (2012) section 110(1)

Variable	Definition	Indicator/ measurement	Reference
Institutional capacity			
Human Resource & Technical capacity	Technical skills and staffing levels to deliver those mandates.	**Qualitative review**: of perceived knowledge around climate governance, staff allocation to climate governance. Technical / financial support received by counties e.g. for training, development, implementation etc.	Government and Development partners information on technical and technological support to counties
Development Planning and CC Mainstreaming Capacity	Coherence between sector policies and climate compatible development/ sustainable development goals *High integration= is perceived as high capacity*	**Likert Scale 1-5:** level of county integration of CC in development planning and budgets in line with the UNFCC priority areas- on a scale of 1 (low) to 5 (Comprehensive).	UNFCC, SCP, SDGs (2015-2030), Weible and Elgin (2013) MoDP, "Guidelines for Preparation of County Integrated Development Plans (Revised) 2017
Financial Resources & capacity	Allocation of budgets other resources to sectors directly related to climate change adaptation or mitigation strategies (focus on environment and agriculture sector).	**Review of Sector budget** as a % of total county allocation (for environment and agriculture sector).	CIDPs, County Budget Review and Outlook Paper (CBROP), Annual Development Plans (ADPs) and other relevant documents available on county websites or from development partners.
-Technological capacity	Demonstration of adoption and implementation of environmentally sound technologies (EST) uptake through technology-demonstration, deployment, and transfer using policies and mechanisms	**Qualitative Review**: of support for technology transfer, innovative business models and technologies, programmes, policies and strategies and partnerships that catalyze climate finance	IPCC Technology Transfer Guidelines-(2000), GEF, GCF priority areas County and National Climate Flagship projects (wind, solar, energy)
Climate Resilience and Adaptive Capacity			
Climate Risk Management and Disaster Risk Reduction (DRR)	-The capability of institutions and communities respond to, adapt to and bounce back from climatic shock; -Institutional capacity to anticipate and prioritise climate risk, develop and implement climate policies, manage climate finance, and respond to climate vulnerabilities.	Rating scale was developed using the county CC ratings on weather and environment; with reference to Climate risk profiles by CGIAR and other secondary data; population density, and potential climate severity as a function of ability to respond to a shock given the allocated resources	CGIAR County Climate risk profiles

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This Chapter explores the research methodology and design. It includes data collection methods and tools, data analysis, research quality and ethical considerations. It is informed by literature from chapter 2, which identified theories informing public policy, references made to previous studies on climate policy and governance and operationalization of variables.

3.2. Research Design

The study used a mixed scanning model (Amitai, 1967) informed by the political economy theory and systems theory to examine the level of policy domestication, existing structures, institutional capacity, barriers and enablers to climate governance. Mixed scanning incorporates the positive attributes of the rational comprehensive model (Hanekom, 1987) and the incremental model (Charles Lindblom) to evaluate the policy itself, and its impact (Cloete & De Coning, 2016). This study used a descriptive-analytical approach (Holscher, 2019) utilizing both qualitative and quantitative methods to understand existing structures and climate governance processes and how they interact to support climate governance This study involved review of policies and reports from the year 2010 to 2020, as means of triangulation of primary data collected through KIIs; and secondary data reviewed using checklists. A selection of the policies and budgeted strategies were reviewed. Data was presented in tables and through content analysis to reference common themes from which to draw conclusions.

3.3 Sampling Technique

The study focused on five counties (Embu, Tharaka Nithi, Marsabit and Turkana Counties), selected purposively based their involvement climate governance projects, and a variation of arid and semi-arid (ASALs) regions which are in most dire need for climate adaptation and mitigation interventions. During the inception period, the pilot study revealed that there were no county climate change units, and that CC was mainstreamed in either Environment or Agriculture ministries. As such, primary research was conducted through semi-structured key informant interviews targeting 12 respondents who were government staff, development partner representatives, NGO and community representatives engaged in climate governance both at the national and county level. Purposive sampling was done through snowballing method. targeting

sector experts in climate governance. Quota sampling ensured representation of counties and target respondents, to get responses from each category and county.

3.4. Data Collection Method and Procedures

The methods and tools used were totally dependent on the level of complexity and/or comprehensiveness of the existing frameworks in the counties. Considering that 2020 was the seventh year since devolution, an inception period was factored to build the scenarios within the target counties. This was followed by in-person KIIs using the key informant guide: *Mechanisms, Enablers and Barriers to Climate Action (Appendix 2).* Any follow-up clarifications were conducted using phone interviews. The KIIs with sector experts involved in climate governance nationally and at county level to gain further insights. The interviews focused on an in-depth understanding of climate governance processes, structures, participation levels; barriers and enablers to climate action in target counties

A secondary document review was conducted, using the *Checklist for Qualitative Document Review (Appendix 3)* from sources like county websites, CIDPs for the 2013-2017, and 2018-2022 period, and government policies and reports. Climate governance frameworks were either in formative stages or non-existent within the counties. Hence, the study tool was revised to focus on county structures and capacities and not focus on individual staff as initially anticipated. A tool was completed for each county looking at various capacities as defined in the analytical framework, checking for adopted policies, laws, and budgeted strategies, against those that exist at the national level. Further, a deep dive of level of climate mainstreaming into development planning, the percent of resources allocated to environment and agriculture sectors as a percent of total county budget was conducted. This was to establish the financial and resource capacity of county government to implement the policies, as well as where possible, the extent of implementation. Reports by development partners informed on technical and technological support to counties and barriers or enablers to climate governance.

3.5. Data Validity and Reliability

High standards of research quality were upheld by referring to existing study designs and tools. For purposes of data integrity, efforts were put in place to ensure that any system used to generate all the data is protected from deliberate bias or manipulation for personal reasons. In keeping with standard data quality practices, data was cleaned, and accurate and complete responses are

obtained at the data source. Triangulation was used to validate the data from various sources (Eller et al, 2013).

3.6 Data Analysis

The study utilized a descriptive-analytical approach Holscher, 2019) to understand existing structures and climate governance processes and draw broad conclusions based on theories. Data was analyzed in two steps. First, Quantitative data was analyzed against the objectives; to identify descriptive statistics on the policies adopted, as well as extent of adoption of policies. The data was presented through frequency tables. Qualitative data underwent coding to enable content analysis in line with the analytical framework and study objectives. The information was then ordered according to relevant themes and triangulated to enable further analysis to draw conclusions and recommendations. This entailed use of a mixed scanning model and political economy analysis of climate governance in the target county, factoring the interests, power dynamics and existing governance structures and how they interact to drive climate governance Data analysis was informed by the operationalized variables section in Chapter 2 to describe variables and their measurements.

3.7 Ethical Considerations for the Study

In line with the proposed guidelines for conducting research, the study was both voluntary and based on informed consent; and participants were informed of the benefits of the study and their participation; and the approach to be used in conducting the study *(Appendix 1)*. The participants reserved a right to anonymity and confidentiality and could withdraw from participation if they choose to do so, without any consequences. The participants were requested for permissions and informed consent for recording of the discussions; however, the report did not openly display or reveal their names. All data collected was safely secured to ensure that it is not accessible to unauthorized persons. Privacy was guaranteed by scheduling physical or phone interviews and obtaining permission to interview participants. Interactions between the researcher and participants was based on respect and trust. Ethical obligations of the researcher included being impartial at all stages of the study, seeking credibility based on reliable data and observations, avoiding conflicts of interest and being guided by honesty, integrity and accountability *(Appendix 7)*.

CHAPTER FOUR

FINDINGS

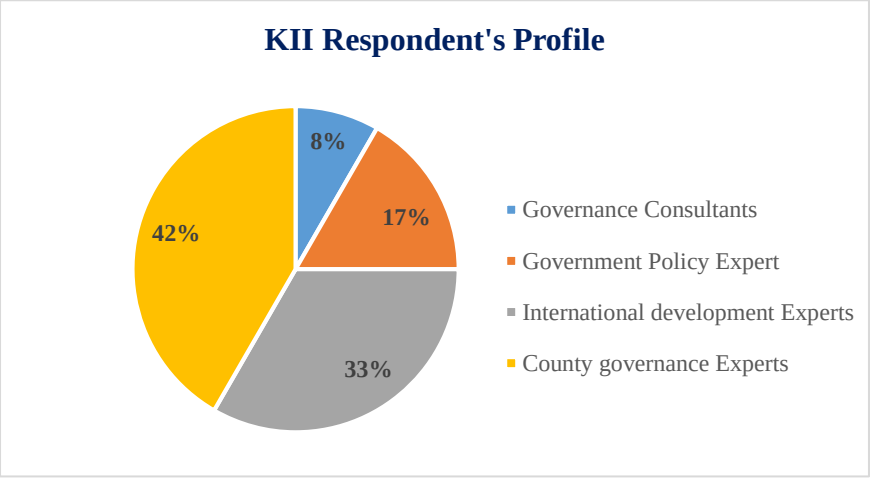
4.1. Introduction

This chapter discusses findings from the study based on the review of policy documents, planning and budget documents, websites and programmes at county and national level, as well as primary data collection through key informant interviews. It goes further to explore how the findings link to the analytical framework in Chapter 2, evaluating existing governance structures, the technical and financial capacities of county governments, and the enabling factors and barriers to policy domestication at county level. This is mirrored against what exists at the national level in terms of climate governance.

4.2. Study Participants

A total of 12 key in-depth interviews (KIIs) were conducted with a mix of respondents from International development partners (policy and climate change experts), local development partners/ NGOs, county government and community representatives. These were at the time of the study engaged in climate governance policy in all or some of the target counties, and were able to authoritatively discuss climate governance frameworks, enablers or barriers in those counties given their engagement with the counties.

Figure 1 KII Respondent's Profile



4.3. Extent of County Adoption of Climate Change Policies in Kenya

To analyze the extent of adoption, a review was done at county level of what policies have been domesticated, either as a mirror of the national level climate policy, or in semblance, factoring the local context to ensure that the policy is responsive to the local needs. Anecdotal evidence from

the study shows that counties that have received both technical and financial support for climate change adaptation have made more headway in terms of domestication, and operationalization of policies. Of the five counties, only Turkana County has a climate change policy in place, while for all the other counties, they are still in draft form. Further, only Makueni and T/ Nithi Counties have CC Fund regulations, while Turkana has draft CCF regulations at review stage by the County Attorney as of Oct 2020.

The highest level of adoption was in sub-sector policies, with most of the national level climate policies being in adoption process, or not adopted altogether. Majority of the sub-sector policies are on Natural Resource Management (NRM), e.g., on sand, water, pasture, charcoal and forest management, Table 4.1. Hiring of consultants to support the process of domestication led to faster adoption, as the work of drafting was handled by an external party, with given timelines for completion of tasks. Similar, technical and financial support e.g. in the case of Devolved Climate Finance (DCF) mechanism by NDMA in 2013 through a regional approach of the county economic bloc; led to successful adoption of CCF legislations in the 5 counties, and allocation of resources of between 1-2% of total county budgets for climate governance.

Table 4.1 Domesticated Climate Change Policies and Strategies

National Level Policy	**Status of adoption**		**County Level policies on Climate change**
	County	Status (Adopted/ not adopted)	List of **Specific County Level Policy**
a) National Climate Change Act 2016	Embu	Adoption-in process	The climate change policy and Climate Change Bill are in draft stages.
	Marsabit	Not adopted	
	Makueni	Adoption-in process	Draft Climate change policy and Climate change Bill are in draft stages.
	T/Nithi	Not adopted	The climate change policy is currently in draft stages; NAP mainstreamed in county planning. Not explicitly mentioned
	Turkana	Adoption-in process	Planned development of County Climate Change Policy and Act (2019, pp217)- *Support from Trócaire and Caritas Lodwar- under DFID (DDP)*
b) Sessional Paper No. 3 of 2016 on National Climate Change Policy Framework	Embu	Adoption-in process	Draft Climate change policy with support of PACJA and Trócaire (Irish Aid & UKaid funding)- since 2018
	Marsabit	Adoption-in process/ scheduled	Scheduled in the 3rd Year of CIDP 2018-2022 Implementation, (CIDP, pp 111) Awaiting county assembly approval, as at Aug 2020
	Makueni	Adoption-in process	Draft Climate change policy and Climate change Bill are in draft stages.

National Level Policy	Status of adoption		County Level policies on Climate change
	County	Status (Adopted/ not adopted)	List of **Specific County Level Policy**
	T/Nithi	Adoption- in process	Draft Climate change policy with support of PACJA and Trócaire (Irish Aid & UKaid funding)- since 2018
	Turkana	Adopted	Turkana County Climate Change Policy, (Sept 2020)- *Support from Trócaire and Caritas Lodwar- under DFID (DDP)*
c) National Environment Policy - 2013	Embu	Adoption- in process	✓ Embu County Environment Management Bill, 2015 Supporting sub sector policies include: ✓ Embu County Water Bill, 2015 ✓ Natural Resource Management Policy and Bill are still at the draft stages. ✓ Sand harvesting policy and Act scheduled (in CIDP 2018-2022)
	Marsabit	Adoption- in process/ scheduled	Sub sector policies include: ✓ Marsabit Rangeland Policy & Rangeland Bill
	Makueni	Not adopted	Sub sector policy: ✓ Makueni County Climate Information Services Plan (MCCISP) -aims to develop and deliver weather and climate information ✓ Makueni Water Act 2020 & Water Policy ✓ Makueni County Water Bill 2019 ✓ Makueni County Sand Conservation and Utilization Act 2015 ✓ Makueni County Sand Conservation and Utilization Act 2015 ✓ Makueni County Emergency Fund Act 2015
	T/Nithi	Not adopted	Sub-sector Bills at different stages of discussion at the county assembly include: ✓ Sand harvesting draft bill – 2015; ✓ Natural resources management draft bill – 2017; ✓ Charcoal draft bill – 2017, ✓ Water resources management draft bill – 2017 and Environmental Management and Coordination Act (EMCA) bill all supported by Trócaire and PACJA. ✓ T/Nithi Disaster Management Bill 2019 has been tabled at the Cabinet Level;
	Turkana	Adoption- in process/ scheduled	Subsector Bills identified: Sub sector Draft Bills: ✓ Draft Turkana County Environment Policy and Bill (with FAN support) plans in CIDP (2019, pp215) ✓ Policy Framework for Extractive Industries in Turkana-County, Sept 2018 ✓ Turkana Energy Sector Plan- with GIZ support) CIDP, 2019, pp45 ✓ County NRM Bill, 2018 ✓ Turkana County NRM Policy, 2018;

National Level Policy	Status of adoption		County Level policies on Climate change
	County	Status (Adopted/ not adopted)	List of **Specific County Level Policy**
			✓ Turkana County Rangeland management policy spearheaded by ChildFund under DDP
d) National Climate Change Adaptation Strategy 2013-2030	Embu	Not adopted	The climate change policy is currently in draft stages; NAP mainstreamed in county planning.
	Marsabit	Adoption- in process/ scheduled	Considerations factored in the Marsabit County Climate change Action Plan (CCAAP). Other sector policies include: County Agriculture Sector Plan; Livestock Policy; Livestock and Marketing Bill
	Makueni	Not adopted	Sub sector policy: Social Protection Policy-
	T/Nithi	Not adopted	The climate change policy is currently in draft stages; NAP mainstreamed in county planning.
	Turkana	Not adopted	Considerations factored in the TCG CCAAP.
e) National Climate Change Adaptation Plan (NCCAP- 2013-2017; 2018-2022)	Embu	Not adopted	The climate change policy is currently in draft stages. Mainstreamed National Action Plans (NAP's) into County planning (CIDP) and draft climate change policy, including Ecosystem based Adaptation (EbA).
	Marsabit	Adopted	Marsabit County CCA Action Plan- (2018-2022)- *with Support of GIZ & AMBERO-*
	Makueni	Not adopted	
	T/Nithi	Not adopted	Mainstreamed National Action Plans (NAP's) into County planning (CIDP) and draft climate change policy, including Ecosystem based Adaptation (EbA).
	Turkana	Adopted	Turkana County CCA Action Plan- (2018-2022)- *with Support of GIZ & AMBERO*
f) National Climate Change Response Strategy (NCCRS)- 2010	Embu	Not adopted	
	Marsabit	Not adopted	Considerations factored in the MCG CCAAP.
	Makueni	Not adopted	Considerations in the Makueni County spatial plan Makueni Climate Change Fund Bill (2015)- to support CC finance
	T/Nithi	Not adopted	T/ Nithi Climate Change Fund Bill (2019)- to support CC finance
	Turkana	Not adopted	Considerations factored in the TCG CCAAP. draft CCF regulations are at review stage by the County Attorney (Oct,2020).

4.3.1. Summary of achievements by County:

Embu County: The Environment and Natural Resources Chief Officer through the county website confirmed that the county is in the process of enacting waste management, natural resources and water policies to ensure sustainable development, and to transition to a low carbon climate resilient economy. As a result, a number of policies have been developed. The Embu

County Water Act – 2015 and The Embu County Environment Management Act – 2015 have been passed. Draft policies: Climate Change Policy Climate and Change Bill -2019 (in the review stage) with support from PACJA; Further, the Embu Natural Resource Management Policy and Bill are still at the draft stages with technical support from Trócaire. The draft CC policy will be implemented through costed periodic CC Action Plans integrated in CIDPs. It will facilitate a coordinated, coherent and effective response to climate change through mainstreaming in development planning (Embu County Website, 2020); targeted at reducing vulnerability and building climate resilience for property, environment and economy. Other supporting policies spearheaded by the Chief Officer Environment and Natural Resources are waste management, natural resources and water policies to support sustainable development initiatives. There are plans to develop a county Sand harvesting policy and Act (Embu CIDP, 2019, pp 88).

Tharaka Nithi County: The Climate Change Fund Bill 2019, has been published. Other bills developed by the county government are at different stages of discussion at the county assembly include: Sand harvesting draft bill – 2015; Natural resources management draft bill – 2017; Charcoal draft bill 2017, and Water resources management draft bill – 2017 and Environmental Management and Coordination Act (EMCA) bill all supported by Trócaire and PACJA. T/Nithi Disaster Management Bill 2019 has been tabled at the Cabinet Level; and according to the Governor's state of the County Address 2020 (pp23); he urged the Cabinet to fast track it's approval. The Mining Bill is also at cabinet level waiting for debate at the county assembly.

Makueni County has made headway in climate finance, having established a Climate Change Fund Bill (2015) that committed one percent (1%) of the annual development budget to climate change. Makueni County benefitted from being part of a technical facility pilot project by Adaptation Consortium (ADA) for '*Mainstreaming climate into the public finance management system'* at national and county level planning, through a Devolved Climate Finance (DCF) mechanism by NDMA in 2013 to support climate adaptation mainstreaming. This is one case of where a regional approach of the county economic bloc; Frontier Counties Development Council; comprised of Garissa, Isiolo, Mandera, Marsabit, and Wajir; has succeeded in spearheading adoption of climate policies (NCCAP 2018-2022, pp 43). This pilot involved 5 counties: Kitui, Makueni, Wajir and Garissa, all of whom have established CCF legislations; Wajir County Climate Change Fund Act (No. 3 of 2016), Garissa Climate Change Fund Act (2018) and Kitui Public Finance Management Act , and Kitui County Climate Change Fund Regulations (2018). These counties have allocated between 1-2% of their budgets to climate governance. Through this

technical support, these counties have passed Climate Fund legislations that established County Climate Change Funds (CCCF) anchored in the national climate change legislations and the Public Finance Act (2012), enabling them to tap into international and domestic climate finance directly.

Marsabit County: Marsabit County has been able to domesticate and develop some CC and NRM policies and guidelines; as well as CC mainstreaming into CIDP through technical support of various development partners, collaboration between MDAs and civil society. For instance, the formulation of the Marsabit County Climate Change Mainstreaming Guidelines (Water sector, DRR sector, and agriculture, livestock and fisheries sector) was supported by DFID StARCK+ Extension Programme. Further the Marsabit County Climate Change Adaptation Action Plan (MCCCAAP) 2018 -2022 was developed within the general framework of the National Climate Change Response Strategies (NCCRS) 2010 and National Climate Change Adaptation Action Plan (NCCAP) 2013 as they relate to the fragile Arid and Semi-Arid Lands. It was developed with support from German Development Cooperation (GDC)/GIZ in collaboration with other government MDAs and non-state actors; and led by a consultant and AMBERO consultancy firm. Other policies that are currently at various stages of development with support from development partners include: County Agriculture Sector Plan; Rangeland Policy; Rangeland Bill; Livestock Policy; Livestock and Marketing Bill. Reports indicate that the draft climate change policy is in place as at August 2020, waiting approval of the county assembly (NTV Kenya, 2020), however it's not available publicly.

Turkana County: The first climate change legislation for Turkana County is the Turkana County Climate Change Adaptation Action Plan (TCCAAP), Technical Working Paper 2018-2022, supported through German Development Cooperation GDC)/ GIZ. This was developed in collaboration with Turkana County Department of Water Services, Environment and Mineral Resources, National Government Authorities like NEMA and NDMA where Climate Change is domiciled. Turkana Climate Change Policy, 2020 was developed with support of Trócaire and Caritas Lodwar, under the Deepening Democracy Project (DDP) Project, *"Promoting Ecosystem-based Adaptation Approaches to Climate Change Governance in Turkana County*" which was funded by UKaid (DfID). It was supported by Turkana County Community Land Technical committee, FAO under the EU funded Land Governance Programme and the Turkana County Ministry of Water Services, Environment and Mineral Resources. Further, through the DDP project Trócaire and Caritas Lodwar are working to further strengthen Turkana County government in the drafting and enactment of the CC legal framework in collaboration with other

development actors. Reports by Trócaire for the 2015-2016 period show that Forest Action Network (FAN) collaborated with the Turkana County Government (TCG) to develop Bills and policies on natural resource management, including: 1) Turkana County Environment Policy, 2018 and the Turkana County Environment Bill, 2018: including charcoal management and environmental pollution; 2) Turkana County NRM Bill, 2018 and the Turkana County NRM Policy, 2018: including rangelands management, forest and water resources management. These bills were presented to the relevant County Executive Committees (CECs), were put before the County Assembly and have passed through various amendments (Trócaire, Feb, 2017). Review of the TCG website under Ministry of Tourism, Culture and Natural Resources, Department of Natural Resources indicates that the Natural Resources Policy and Bill was submitted to the cabinet for approval (TCG website, 2019).

Other policies under development include Turkana County Agriculture Sector Policy; Turkana County Agriculture Bill; County Agriculture Sector Plan; supported by GDC/ GIZ and seek to mainstream climate change actions in the agriculture sector. The Ministry of Agriculture Pastoral Economy and Fisheries (MoAPEF) has developed a draft Agriculture policy whose focus is on crop production, irrigation and land reclamation. During the development of the draft policy and bill, Kenya Law Reform Commission (KLRC) advised the MoAPEF on the Legislative process of both the draft Policy and Bill with technical support from UN Agencies, NGOs, JICA, Academia, Research Institutions.

Some of the key county policies such as the Turkana County Environmental (Regulation and Control) Act, 2018 and The Turkana County Water and Sewerage Services Bill 2018 have failed to articulate climate change actions (Trócaire, 2019), cited in DDP report. Turkana County has a planned for establishment of an *Extractive sector regulations and strategies* and *County Energy Sector Plan* to ensure compliance to the proposed Energy Bill (TCG CIDP, 2018-22, pp219). The County has an opportunity to pursue sustainable rangeland management policies that support repair of the severely degraded soils, pasture and water resources to support livestock holding capacity. Through the TCCAAP Turkana county has identified priority adaptation and mitigation actions per sector and indicated tentative costs for the interventions (TCCAAP, 2019), pp73-80).

4.3.2. Policy Adoption Summary

In summary, with regards to policy adoption, political economy is salient in the direction that counties choose to take. How policy agenda setting is done, why who and with what interest and level of influent is very key. Development partners hold ideas, power and resources are and are able to influence laws, regulations, and government policies especially as they offer development financing .Other factors that contribute to or inhibit climate policy are peer pressure , example through counties engaged in same governance programmes or within target economic blocs, and political goodwill by the county leadership as in the case if Makueni County. Creation of policy coalitions fast track policy adoption through creation of citizen agency and providing a strong voice through which civil societies, action groups or private sector collectively demand action by duty-bearers. The highest level of adoption was in sub-sector policies, with most of the national level climate policies being in adoption process. The success was as a result of policy coalitions e.g. where Trócaire financed, accompanied and coordinated organizations in Embu, Kitui, T/Nithi, and Turkana County with PACJA as a technical back-stopper; or DFID's ADA Consortium which provided technical and finance facility.

4.4. Existing County Level Climate Governance Structures

Governance structures in counties are very key for guiding the policy process in terms of policy initiation, policy development, public participation and resource allocation and implementation. The NCCAP (2018) provides for State departments and national public entities to establish climate change units (CCUs) and integrate CC into strategies and plans and submit annual reports to the CC Council. The review of climate governance structures focused on macro, meso and micro level climate governance structures and land governance and spatial planning at the county level as a basis for development planning.

4.4.1. County Level Climate Governance Structures

Devolution in Kenya has been key in enabling county specific policy development, which has seen some counties move faster than other in domestication of national policies, as well as establishment of climate change fund regulations and governance mechanisms. Makueni county has most of the institutional and climate governance structures that enable for the implementation of climate adaptation and mitigation interventions, which are mostly missing in the other four counties. The other counties are in the process of setting up, or are riding on other existing sector structures, formal (e.g., county steering groups and NDMA); informal structures (village level), or even individuals employed to steer climate interventions. The NDMA was present in all the

counties, being ASALs, but the overall core structure of Climate Change Unit (CCU) was missing across all counties. A detailed review of governance institutional structures by county is on Table 4.2.

Table 4.1 Institutional & Governance Structures by County

Institutional Structures in place	**Embu**	**Marsabit**	**Makueni**	**T/ Nithi**	**Turkana**
a) County Climate Change Fund	-	-	✓	✓	✓* draft
b) County Climate Change Steering Committee	-	- CCA Secretariat	✓	✓ CC PSC	✓ CC SC
c) County Climate Change Oversight Board	-	-	✓	✓* (CFB)	✓ CC Adv. Team
d) Climate Change Planning Committees (CCPCs)	-	-	✓	✓* CPC	✓ CCPC
e) Climate Change Information Services	✓ (NDMA)	✓ (NDMA/ KMD)	✓CC Info Serv.	✓ (NDMA)	✓ (NDMA)
f) Ward climate change planning committees (WCCPCs).	-	-	✓	✓*	✓
g) County Monitoring & Evaluation systems	-	✓	✓	✓*	✓
h) County CC Budget tracking systems	-	-	✓ (CCFI)	-	-
i) Climate Change Unit (CCU)	-	-	-	-	-
Governance Structures in Place	**Embu**	**Marsabit**	**Makueni**	**T/Nithi**	**Turkana**
a) Climate Change focal person	- CEC Env	- CEC Env.	✓ Chief Off. CC	- CEC Env	- CC Adv ** -CEC CC
b) Government sector working groups/ Technical working groups (TWGs)	✓	✓	✓	✓	✓
c) Local governance structures- (macro) County Level	-	-	✓	-	-
d) Local governance structures- (meso) Sub County level	-	-	✓	-	-
e) Local governance structures- Ward level	-	-	✓	-	✓
f) Community governance structures- (micro) e.g., community groups	-	-	✓	-	-* Village adapt. Comm.
g) Civil society structures e.g., Civil society reference groups/	-	✓	✓	✓ CSG	✓

Key: ✓ Structure in place;

✓***** Proposed; not yet established at the point of conducting the study/ factored in policy but not operational/ or regulations in draft;

** structure budgeted/ not recruited)/

Embu County: Embu County has drafted a County Climate Change Policy establishing an effective, accountable, and transparent climate framework for a coordinated, coherent and

effective response, articulating priority interventions (Embu County Website, 2020). A technical working group was established with the support of PACJA to support CC policy development. However, there is no evidence of other existing county, subcounty, ward level and civil society structures to support climate governance, hence there is weak or no coordinated climate governance mechanism for the county. There is also no evidence of CC fund regulations in place or being developed.

Makueni County: Makueni County has all the governance structures identified. The Climate Change implementation model by Makueni is that of devolved climate finance, incorporating four integrated approaches: Climate Change Fund, Climate Change Planning Committees; Climate Change Information Services; Monitoring & Evaluation of resilience building. The county partnered with ADA Consortium to establish the CCCF structures and undertake investments in six pilot wards, with scheduled roll-out to other wards. According to Makueni County Climate Change Fund Inventory Adaption Investments report for 2013-2017 (2018), an innovative approach has been adopted for public participation of vulnerable communities through Climate Change Planning Committees to enable access to and use of climate finance for resilience strengthening. The CCCF mechanisms have facilitated public participation in climate governance, where communities are actively engaged in identification, selection and monitoring of climate adaptation investments that build communities' adaptive capacity to climate change, with the help of technical officers from county government. Further to this, a climate change fund inventory (CCFI) has been established for budget tracking, and to ensure planning for climate adaptation investments to reduce redundancy and ensure that county resources are used efficiently. (Makueni County, 2018).

Marsabit: most of the governance structures required for county CC governance are non-existent or in the formative stages; with climate governance being sector led, and /or supported by development actors and government MDAs. Under the Water Environment & Natural Resources, a Climate Change Adaptation Secretariat is in place, that is tasked to lobby for establishment of county Climate Change Directorate / Secretariat; and to strengthen inter-sectoral coordination and collaboration for CC adaptation stakeholders; and support to county, sub county and ward level CC interventions (MCCAP, 2019-2023, pp44). Further, the County Environment Committee (CEC), is responsible for providing environment management oversight role, and development of strategic environmental action plan every 5 years (MCCAP, 2019-2023, p44). The MCCAAP, 2019-2023 identifies stakeholders responsible for CCA in the Marsabit county, (MCCAP, 2019-

2023, pp43-46), and priority sector adaptation and mitigation actions (MCCAP, 2019-2023, pp47-57). Marsabit County government conducted a CIDP mid-term review which informed the development an M&E System to track, monitor and evaluate progress against outputs, outcomes and impact of its county interventions under MoALF and with GIZ technical support.

Tharaka Nithi County: has established TNC Climate Change Fund Act, 2019, (TNC, CFA No. 4, 2019), for the establishment of a Climate Change Fund and coordination and implementation of CCA and mitigation interventions, facilitating incorporation of Climate Finance in the county planning and budgetary framework; establishment of Climate Finance mechanisms; coordination with National climate change policy; and sensitization on CC for climate preparedness (early warning and early action). It proposed to establish Climate Fund Board (CFB)- (oversight of fund and committees); County Planning Committee (CPC)- (selection of CC program priorities); County Planning Committee Secretariat; and Ward Planning Committee. The act governs the affairs of these committees and the board (TNC, CFA No. 4, 2019), pp5-7. The county planning committee has been tasked to develop and implement monitoring and evaluation framework for Climate Finance projects and program (TNC, CFA No. 4, 2019), pp8-9. This however has not yet been established at the point of reporting (in Dec 2020). The ward planning committees are tasked in the policy, with public participation in identification and planning of CC interventions at the ward level (planning, budgeting, implementation, monitoring and reporting) (TNC, CFA No. 4, 2019), pp11. NDMA offers climate information updates through the monthly NDMA bulletins and proposes areas for early interventions as a result of shocks.

Further, with the support of PACJA and Trócaire, the County set to develop "best fit" Climate Change policy that covers NRM, beginning in 2018. A 30-member Climate Change, multi-stakeholder policy steering committee-PSC (an equivalent of CC planning committee) was also established to guide the process of the development of the climate change policy. This was through a participatory cross sector engagement involving ASDSP, Ministry of Agriculture, Ministry of Fisheries, Ministry of Livestock, NEMA, County Assembly, CSOs (KENAFF and SAPAD) and Caritas Meru; through an Ecosystem Based Adaptation approach.

Turkana County has vibrant institutions, government, civil society and development actors, that provide the basis for creating a more coherent and stronger climate change governance. According to a report by Trócaire, establishment of a Climate Change Advisory Team (CCAT) in the office of the governor is a clear indication of high-level political commitment by the county leadership.

The county however lacks most of the institutional frameworks required for climate governance. A number of stakeholders and development actors have supported in CC governance. For instance, Trócaire and Catholic Diocese of Lodwar (DOL) through the Deepening Democracy Initiative (2018-2020) supported the drafting of the Turkana County Climate Change Policy and Bill (2020). The county has established a County CC Steering Committee (CCSC), and County CC Planning Committee (CCPC) chaired by the County Chief Officer in charge of CC; and Ward Climate Change Committee. At the time of preparation of this report (2020) Turkana County had not established a Climate Change Directorate that should provide oversight and coordinate climate action at the county level (TCCAAP, 2019, pp50).

Turkana county government lacks CCCF regulations and has not established a Climate Finance Fund (CCF). The draft CCF regulations are at review stage by the County Attorney (Oct,2020). The CCCF establishes a climate financing model that can tap into global climate finance for adaptation and climate resilient development pathway. The County Steering Group Committee (CSG) provides a CC action coordination mechanism for climate action, and dissemination of climate information through the monthly NDMA bulletins and for government agencies and non-state actors for policy influence and resource allocation for CCA. Turkana Climate Change Policy, 2020 recognizes attempts to establish Village Adaptation/ Disaster Management Committee which serve as CC Committees spearheaded by donor projects however, these are not fully operational or sustainable as they are not anchored on any legal framework (Department of Water, Environment and Mineral Resources, Turkana County Government, Sept, 2020); pg11

The Turkana CIDP 2018-2022 has envisaged creation of county CC Advisor position domiciled in the office of the Governor; a post that though budgeted for in the FY 2019/2020 budget proposal, was yet to be filled at the time of writing this report (Sept,2020). According to the Turkana Climate Change Adaptation plan- TCCAAP (2019-2022), the Ministry of Water Environment and Mineral Resources (MWEMR), headed by the County Executive Committee (CEC) member, is responsible for water and environment. The MWEMR has two departments, Water Development, and Environment and Mineral Resources Management, each headed by a Chief Officer and a Sub-County Water Officer and Environment Officer. There is no representation at Ward and Village Unit level. Turkana County as of March 2020 had no established climate change unit (CCU), and therefore relies on MWEMR to implement climate adaptation interventions (TCCAAP, 2019), pp50). The County Commissioner coordinates the Water Resource Management Authority (WARMA), National Environment Management

Authority (NEMA), Kenya Forestry Research Institute and Kenya Forestry Service, Kenya Wildlife Service, National Drought Management Authority (NDMA) and the National Land Commission (NLC), (TCCAAP, 2019), pp73-80)

4.4.2. Land Governance and County Spatial Planning

Despite the fact that the land governance guidelines that came into effect with the new constitutional dispensation in 2010, and with devolution in 2013; only few counties: (Lamu County (Lamu County Spatial Plan (CSP) , 2016-2026), and Makueni counties (Makueni County Spatial Plan , 2019-2029), out of all the 47 counties have managed to develop county spatial plans, as at August 2019. Under this study, only Makueni County and Turkana County have made efforts to develop Spatial plans, while the other 3 counties are in the initial stages of planning. Communal land ownership is the land tenure system in for Turkana and Marsabit Counties, where the land is held in trust by the county government for the community. Communities are expected to apply for Community Land Titles (CLTs) under the Community Land Act No 27 of 2016, and in accordance with the Section 8 of the Land Registration Act, 2012. The land remains unadjudicated largely in these counties.

Noting the low technical and financial capacity for counties to develop CSP, capacity building was conducted in March 2019, by UN-Habitat, National Land Commission (NLC), for 23 counties: Bungoma, Busia, Embu, Elgeyo Marakwet, Garissa, Kakamega, Kirinyaga, Kilifi, Kisii, Kwale, Nyandarua, Nyeri, Makueni, Marsabit, Meru, Migori, Murangá, Kajiado, Mandera, Laikipia, Taita Taveta, Trans Nzoia, and Wajir. This was done to strengthen policy maker's capacities in contextualizing planning processes to the local planning contexts, and to help utilize spatial planning as a tool for climate change resilience. Out of the five counties under this study, 2 counties; Tharaka Nithi and Turkana County were not targeted under the UN Habitat County Spatial Planning Initiative offering technical assistance for CSP preparation, monitoring and implementation to 23 counties. Embu, Makueni and Marsabit have been targeted. A summary of the status of county spatial planning is on Table 4.3.

Table 4.2 County Status on Spatial Planning as Prerequisite of Land Governance

County	Status	Financing	Remarks
Embu	The process has not started yet	Allocation of KSh. 180M, for the work in the 1st year (Embu, CIDP 2018, pp. 133-134.	✓ Limited understanding on CSP by the policy and technical teams in the county ✓ More awareness creation among county policy makers for them to appreciate the CSP

County	Status	Financing	Remarks
Makueni	Makueni County Spatial Vision, 2030; Makueni County Spatial (CSP) Plan, 2019-2029 developed	Funding: Ksh. 25 million was allocated by the county government	✓ Technical support from UNDP through consultants provided ✓ Training of technical staff through the county assembly ✓ Public participation conducted
Marsabit	Marsabit County is in the process of developing a County Spatial Plan		✓ Technical support from UN Habitat (UN Habitat, 2020) ✓ UNCT project that aims to develop a UN Joint Programme on Spatial Planning ✓ Moyale Integrated Urban Development Plan, (IUSP) Marsabit Kenya
Tharaka Nithi	The process was scheduled to begin with the 2nd generation CIDP.	Ksh.9.5 Billion been allocated for land governance; (T/ Nithi CIDP, 2018-2022, pp 127-128).	✓ There is no Spatial Plan in place, no publicly available report to indicate that the process is ongoing. ✓ T/Nithi, CIDP, pp 82.
Turkana	The process has started.	Turkana CIDP, 2018-2022, pp136;	✓ 9 towns have their approved spatial plans, while 6 others are yet to get County Assembly approval.

Below is a detailed review on land governance and spatial planning by county:

Embu County: has no County Spatial Plan but has factored in the 2018-2022 CIDP to conduct spatial planning, allocating KSh. 180M, for the work in the 1st year of implementation. Further, Ksh. 180M, has been allocated in the CIDP for automation of land records and processes, scheduled for the 3rd year of implementation, and Ksh. 200M for surveying and land demarcation. A further Ksh.1.3B has been allocated for town planning and urban planning (Embu, CIDP 2018, pp. 133-135. Embu County is part of the 23 counties targeted for technical support under the UN Habitat and other development partners support for county spatial plan (CSP) development.

Makueni County has planned for the 2018-2022 period to strengthen agricultural and land policy, legal and institutional frameworks for improved land governance, targeting agricultural land use policy to guide land use, management, tenure and related environmental conservation (Makueni CIDP, pg20). The Department of Lands, Urban Development, Environment and Climate Change has prepared the County Spatial Planning Bill to inform urban and rural socio-economic development. The Makueni County Spatial Vision, 2030; and Makueni County Spatial (CSP) Plan, 2019-2029 seek to domesticate and operationalize the national Kenya Vision 2030, the National Land Policy, the National Spatial Plan and the Makueni Vision 2025 (Makueni, CSP, 2019), pp 107-109. It focuses on among others: conservation and sustainable natural resource exploitation; climate smart agriculture; sustainable development planning; disaster response

facilities and infrastructure; road infrastructure planning; land use management strategy; including urban and rural planning and agricultural land preservation, (Makueni, CSP, 2019), pp127-129.

Chapter 5 of the Makueni CSP, 2019-2029 describes the county development perspectives, focusing on conservation-led growth, Agro-industrial growth, and Urbanization and trade-led growth; with a hybrid development model for a sustainable development trajectory, (Makueni, CSP, 2019), pp 130-158. According to the county website, MCSP-2019 was developed with technical and financial support from UNDP through the Council of Governors (CoG), through an inter-departmental team and in consultation with key stakeholders. The county spatial data will be stored at http://makueni.maps.arcgis.com/home.

Makueni Vision 2025 adopts a sectoral planning approach to facilitate resource allocation to achieve sectoral outcomes; while the *Makueni County Spatial Plan 2019-2029* provides a spatial, structural and strategic guidance for County's territorial space development to ensure distributional justice, and sustainable development outcomes, (Makueni, CSP, 2019), pp 110-111. The Spatial Plan forms the basis for National Land use Policy implementation by providing a framework for preparation of detailed land use plans. It was shaped by the Makueni Spatial Vision 2030, to tackle among others destruction of water catchments, land degradation, transport and energy infrastructure, land fragmentation, unsustainable natural resource extraction, agricultural productivity, tourism and urban planning, and ensuring that it is climate proofed; (Makueni, CSP, 2019), pp109-111.

Marsabit County: Marsabit County is in the process of developing a County Spatial Plan - Moyale Integrated Urban Development Plan (ISUDP) with support from UN Habitat (UN Habitat, 2020). This project is linked to a UNCT project that aims to develop a UN Joint Programme on Spatial Planning that seeks to operationalize the National Spatial Plan (2015-2045). Other targets under the CIDP include development of spatial plan, provision of title deeds, development of land use policy, and development of Land Information Management System (Marsabit County, CIDP, pp59). Environment and Climate Change has been recognized as a major challenge facing the county (Marsabit County CIDP, 2018-2022, pp. 26). A natural resource assessment was conducted to inform the CIDP and identified challenges as land ownership (communal land ownership), and lack of spatial planning, poor legal and policy frameworks for mineral exploration and extraction. It also identified reduced biodiversity, poor rangeland management and land degradation; exacerbated by challenges of enforcement natural resource management by-laws and lack of land

use policy; further affecting capacity to tap wind and solar energy, (Marsabit County CIDP, 2018-2022, pp. 26; pp 59). In Alignment with the President's Big- Four Agenda (2017-2022), Marsabit County has planned to fast-track land adjudication and issuance of title deeds (Marsabit County, CIDP, pp44).

Tharaka Nithi County: In the absence of a County Spatial plan, Tharaka Nithi County in the 2018-2022 CIDP made reference to the National Spatial Plan (2015-2045). Chapter 4 of the CIDP describes the development priorities and initiatives, identifying the county spatial development framework, upon which development programmes shall be anchored, (T/Nithi, CIDP, pp82). While this gives a list of things to be done, it fails to do a resource mapping, which would inform climate proofing of infrastructure; and climate risk assessment based on available resources to meet the threshold of climate responsive planning. It however met the 'constitutional requirement' of having in place a spatial framework to enable allocation resources for development expenditure. The county has not reported on initiation of any plans to develop a CSP. The 2018-2022 CIDP mentions county spatial planning in passing and highlights some of the priorities like resource mapping of land uses, establishment of G.I.S LAB and setting up of Land Information Management Systems (T/ Nithi CIDP, 2018-2022, pp 123-124. About Ksh.250M has been allocated from 2018 -2021 for preparation of spatial plans, and another KSh. 9.243B for land adjudication and land dispute adjudication (T/ Nithi CIDP, 2018-2022, pp 127-128).

Turkana County in the 2013-2017 CIDP states that land is communally owned but held in Trust for the community by the County Government (CIDP, 2013, pp 18), hence there is no title deeds for land, apart for land acquired by three individuals. In such a case then, people are free to roam and settle on any land. The first generation CIDP under the Land, Physical Planning and Urban Areas Management allocated KSh. 500M for spatial planning, and modernization of Lodwar, Kakuma, Lokichoggio and other upcoming towns within the county; and for physical planning and surveying, KSh. 1.1 billion; Urban Areas Management, KSh. 1.5billion; purchase of lands, physical planning software, equipment, and vehicles, KSh. 106M; formulation of land policies and regulations, KSh. 50M (CIDP, 2013, pp287). A report by Cities Alliance, (2019) shows that The Turkana County Government has a done planning of nine (9) towns: Lodwar, Kakuma, Kalobeyei Refugee Settlement, Lokitaung, Lorugum, Lowarengak, Kalokol, Lokichiggio, Lokori and Lokichar. Other towns have been planned but have not yet been approved by the County Assembly; Turkana CIDP, 2018-2022, pp136; (Lemuya, 2019), pp7.

In the 2nd generation CIDP, climate change, land degradation has been identified as major challenges facing the county, especially in Turkana South and East oil fields as a result of chemical pollution of soil, water and air. Further, unsustainable over-exploitation of natural resources especially in areas with large human settlements, especially around the refugee settlements was highlighted (Turkana CIDP, 2018-2022), Popular version, pp10). This calls for a policy to ensure land rehabilitation, and natural resource governance, especially with a target for sustainable rangeland management including reseeding of rangelands; reforestation, as well as energy efficient cooking stoves to reduce the large exploitation of forest biomass. With the large flagship projects like the Oil and gas extraction in Turkana South, the geothermal and wind energy projects, there is community displacement from traditional normal season and dry season grazing lands, affecting communal governance of natural resources like pasture and water.

4.4.3. Governance Structures Summary

In summary, governance structures are formal and informal institutions that govern access to, control of, and sustainable management of natural resources by creating citizen agency in tackling collective issues. It seeks to address the free-rider problem in management of public goods. The weak or non-existent governance institutions seven years into devolution, or their existence in an ad hoc manner, that is largely informal and not well coordinated perpetuates information asymmetry and lack of citizen agency. This prevents community action as they are not involved in resource allocation, or informed in a structured manner about available resources, opportunities for public or private participation in climate governance, and can therefore not hold the duty bearers accountable for their action or inaction. Citizenry ignorance and low participation power means that community priorities are not well entrenched into development planning, and there is no contextualization of policies and interventions leading to low adaptive capacity at the institutional, community and household level. For land governance and spatial planning, counties strive to meet the bare minimum to meet the constitutional requirement of having CSPs in place, some by just including a chapter on county spatial planning in their CIDPs. For counties like Makueni and Turkana, the progress in spatial planning has largely been attributed to the technical support and deliberate allocation of resources by the counties with a systematic approach to spatial planning. Counties are adopting large flagship projects for development of Climate Compatible Development projects including wind power farms, and solar grids. that occupy land surfaces. Governance issues around displacement, compensation and sharing benefits from such projects sitting on communal land have not been proactively through policy and in some cases end up in community or civil society litigation to ensure justice.

4.5. Existing Institutional Capacity for Climate Governance

Climate change governance requires high levels of knowledge, skills, capacity, resources, coherence and coordination to implement, not in isolation or in a linear fashion, but as a systems approach with multiple determinants of success. The national government's mandate is policy development, capacity development and resource allocation. This section reviews counties' human resource and technical capacity, level of integration of CC in development planning, which informs financial and resource capacity, technological capacity and climate resilience and adaptive capacity.

4.5.1. Human Resource and Technical capacity

Overall weak capacity exists for policy formulation and domestication, and planning capacities within County government structures related both to technical skills and staffing levels to deliver those mandates. This is recognized in government documents, especially the transfer of planning and implementing rural and urban infrastructure without the same level of planning capacity. Low capacity is demonstrated in that 1st generation CIDPs (2013-17) were prepared with little knowledge of national plans, resulting in weak links between the county and national levels (EDE, 2014-2020, pp1-4). This is coupled with the public administration problem of inability to let go of a bloated workforce, inherited from the national government after devolution, while some were recruited without proper qualifications due to political patronage. Several reports indicate inadequate finances, inadequate technical and staffing capacity to handle climate change issues, with high reliance on development partners engaged in climate governance (MCCAAP, 2019-2023) pp39; Ozor & Nyambane, 2020. This is further collaborated by a KPMG report on Climate Readiness Index (CRI) 2019, which indicates low capacity for African countries to influence and participate in policymaking, and low advocacy effectiveness for improved climate change policies indicating lack of negotiation and bargaining power (KPMG, CRI 2019) p26.

Interviews with key informants, reports and policy briefs indicated overreliance on consultants, and a few state departments like National Environment Authority (NEMA), Ministry of Environment and Forestry (MEF), and Climate Change Directorate to offer technical support. Overlapping mandates between different institutions poses confusion on who should be responsible to support. Even where there is goodwill to support, low staffing levels in the organizations mandated to offer technical support poses a challenge in terms of ability to support the 47 counties effectively as shown in the participant extracts below.

"Technical support by the Climate Change Directorate is made to counties on request. They claim that they lack adequate resources and officers to reach the entire country. They would need to have regional structures to plan and support the counties, unlike the current countrywide approach." ***KII- International Climate Expert***

"There is low awareness of Members of County Assembly (MCAs) on climate change, hence their low capacity to pass legislation." ***KII- International Climate Expert***

"Confusion or contradiction over the roles and responsibilities for operationalizing laws and policies on natural resource management and agriculture, and between national and County government offices exists." ***KII, Climate Expert***

There are low levels of knowledge and understanding among county government officials on national policy and legal frameworks relevant to county governments. There is a tendency for counties to rely solely on national legal and policy frameworks without tailoring them to local context, and without conducting the necessary climate vulnerability risk assessments to enable them climate -proof investments. NCCAP II (2018-2022) identifies a need to strengthen county capacities in climate change response, climate finance, and monitoring and reporting; considering most counties have no CC Units, with the climate change interventions (in whole or part) being domiciled in Environment or Agriculture ministries. Further, NCCAP II identifies capacity building of CEC members responsible for CC and officials assigned to the County CCU as a priority for the 2018-2022 period. Priority area includes "*CC reporting, public finance management implementation in relation to climate finance, and policy and framework development, linked to the Climate Change Act, Climate Change Policy, and Climate Finance Policy"* ***NCCAP, 2018-2022 pp 73***

Weak understanding of and planning for the natural resource base in counties and low levels of knowledge about local ecosystem services and their importance for development poses a major challenge for climate and land governance programmes. Focus is on economic development and infrastructure with little regard to sustainable development, which results in low prioritization of climate governance and NRM despite serious impacts of climate change and environmental degradation (Kibugi, 2018).A report by UN- Habitat citing a survey by Ministry of Land and Physical Planning (MoLPP) indicates only one county (Lamu) had completed their County Spatial Plan (CSP), two have completed but not approved, 25 have initiated preparation process and 18

have not started at all. CSPs are core to land governance and climate governance by extension; however, counties have prepared CIDPs without CSPs; citing low financial and technical capacity, insufficient political good will and institutional capacities to conduct the CSP process (UN-Habitat, 2019), pp6. This is collaborated study participants especially those working with development partners and civil society.

Generally, this study indicates that most of the actions that have been taken by county governments on climate change policy domestication, integration into development planning or resource allocation have been spearheaded through technical support by development actors, civil society and government MDAs. Anecdotal data shows that counties that have successfully domesticated policies have had support both technical and financial, including to support actions such as public participation, which are not very well resourced by counties.

Case Turkana & Marsabit County: *Turkana County CCA Action Plan- (2018-2022) and Marsabit County CCA Action Plan- (2018-2022- were developed in Turkana and Marsabit counties, respectively with Support of GIZ & AMBERO. For Turkana county, a follow-up project under DFID Deepening Democracy Project (DDP) implemented through Trócaire and Caritas Lodwar supported development of the Turkana County Climate Change Policy 2020.This drew a lot from the Turkana County Climate Change Action Plan"*

Case Turkana County Sector policy development with climate change mainstreaming: *"The Ministry of Agriculture Pastoral Economy and Fisheries (MoAPEF) has developed a draft Agriculture policy whose focus is on Crop Production, Irrigation and Land Reclamation. This was preceded by Training of County staff by GIZ in policy domestication, after which they developed action plans for policy development. During the development of the draft policy and bill, Kenya Law Reform Commission advised the MoAPEF on the Legislative process of both the draft Policy and Bill. Stakeholder meetings were conducted with the ministry technical teams (right from sub county), UN Agencies, NGOs, JICA, Academia, Research Institutions, GIZ and Kenya Law Reform Commission (KLRC) to further strengthen the Policy and Bill. Public participation in all the 6 sub counties was carried out and sensitization to MCAs done. GIZ has supported this by facilitating KLRC to take lead in the public participation process, under the direct request of Turkana County Government (TCG)".*

Case of Tharaka Nithi County: "*With the support of PACJA and Trócaire, the County set to develop "best fit" Climate Change policy that covers NRM, beginning in 2018. This was through*

a participatory cross sector engagement involving ASDSP, Ministry of Agriculture, Ministry of Fisheries, Ministry of Livestock, NEMA, County Assembly, CSOs (KENAFF and SAPAD) and Caritas Meru; through an Ecosystem Based Adaptation (EbA) approach. A 30-member Climate Change multi- stakeholder Policy steering committee was also established to guide the process of the development of the climate change policy. Technical support focused on policy development for CC; as well as integration of policy recommendations on CC mainstreaming in Tharaka Nithi CIDP 2018-2022 development."

Further, lack of evidence and public participation to support policy making, citizen hostility in some instances, affects quality of policies/strategies (Embu CIDP, 2019, pp 78-80)

"*…research was not adequately conducted to form a baseline from which the CIDP implementation would take off effectively. ……. several steps within the CIDP were not effectively done for instance there was inadequate collection of inputs from the public and different stakeholders and several respondents …. due to inadequate funds and lack of proper awareness and induction from both the citizens and the implementing team. …"*

Embu CIDP, 2019, pp 78-80

"Major challenges that the ministry has experienced includes low investments in environment and mineral resources, low staffing in technical cadres, low enforcement of environmental regulations and standards, uncoordinated policies and institutional frameworks, low investments in the economic instruments in conservation and constrain on budgetary resources."

Embu County Website, Accessed, 21st Nov 2020

4.5.2. Development Planning and Climate Change Mainstreaming Capacity

This is a review the level of CC integration into development planning, by comparing the 2013-2017 CIDPs with the 2018-2022 CIDPs for each of the counties. It is based on the key priority areas identified under UNFCC for climate change adaptation and mitigation. The CCA (2016) provided guidance to Ministry of Devolution and Planning (MoDP) to develop climate change indicators to be used in medium-term planning processes. This was supported through the technical guidance by MoDP, "*Guidelines for Preparation of County Integrated Development Plans (Revised) 2017",* ensuring that a template with the key thematic areas was developed and sent to county governments for standardization. According to NCCAP, 2018-2022, all 47 CIDPs mentioned the local CC impacts; and its negative economic impacts, including low agricultural productivity, scarcity of potable water, increased prevalence of pests and diseases, as well as natural resource conflicts (human/ human and human/wildlife).

The study shows a low to medium level of integration of climate change in development planning, especially on articulation of issues, allocating resources and setting targets for Sustainable consumption and Production (SCP), GHG emission targets and Nationally Determined Contributions (NDCs). Embu, Makueni and T/Nithi counties have high integration for CC Mitigation targets e.g., reforestation, forest cover targets. Makueni, T/ Nithi and Turkana CIDP (2018- 2022 made high reference to renewable energy, while Marsabit had high targets for efficient energy use reduced energy consumption. There was medium level of integration of Climate change adaptation targets e.g., ecosystem-based adaption, Disaster Risk Reduction (DRR), ending drought emergencies (EDE) across the counties, except in Marsabit County.

While the levels of integration are still low, this is an improvement from the 2013-2017 CIDPs. Notably, of the five counties, Turkana County is the only county that has expressly made reference to Climate Vulnerability Index (CVI), which gives a critical and evidence-based analysis on county exposure to climate variability and natural disasters, sensitivity to the impacts of that exposure, and capacity to adapt to on-going and future climatic changes (Turkana CIDP, 2019, pp15). The County scored a CVI of 0.515 above the national average CVI of 0.431 which has influenced the county decision for enhanced investment in the County to address the human development issues. The NCCAP proposed collective response, and cooperation among the 6 County Economic Blocs (CEBs), (NCCAP, 2018, PP, 95&96). There is little evidence for cooperation or joint planning among the counties.

A more summarised review of CIDPs and Budget Plans by County, highlighting relevant climate adaptation and mitigation strategies to support the level of integration of CC in development Planning is on Table 4.4. This is a proxy indicator for climate change planning. and analysis was done on a scale of 1 (low capacity) to 5 (high capacity).

Table 4.3 Perceived level of Climate Change integration in County government documents / Budgeted strategies

Perceived level of integration of CC in County government documents / Budgeted strategies *(1=Low, 2=Moderate, 3=Medium, 4=High, 5= Comprehensive)*	County				
	Embu	**Marsabit**	**Makueni**	**T/ Nithi**	**Turkana**
a) Climate Policy (alignment to and engaging in international, national, sub national policy processes)/ effective policy	L	Me	H	L	Me
b) Renewable Energy (to 100% renewable energy by 2050)	Me	H	H	H	H
c) GHG emission targets	L	L	L	L	Me
d) Efficient Energy use (net- zero emissions)/ reduced energy consumption	L	H	Mo	Mo	Me
e) Sustainable consumption and Production targets (SCP) e.g. postharvest management, reduce food loss along the food supply chain	L	L	Me	Mo	L
f) Climate change adaptation targets e.g. ecosystem-based adaption, Disaster Risk Reduction (DRR), ending drought emergencies (EDE)	Me	Mo	Me	H	Me
g) Climate Change Mitigation targets e.g. reforestation, forest cover targets,	H	Mo	H	H	L
h) Nationally Determined Contributions (NDCs) – targets set for the subnational level (county)	L	L	L	L	L

Key to interpret Results

L- Low	No or very minimal reference to targets e.g. renewable energy, GHG, SCP, CCA/M, forest cover
Mo- Moderate	Basic reference to climate change, not very clear on type of investments or budgetary allocations; or targets to be achieved. Broad terms e.g. NRM
Me- Medium	Mentions of climate change investments with targets and locations. Medium reference to targets e.g. renewable energy, GHG, SCP, CCA/M, forest cover, irrigation
H- High	High reference to Vision 2030, SDGs, regional/ sectoral policies and plans reference to targets e.g. renewable energy, GHG, SCP, CCA/M, forest cover
C- Comprehensive	Well-articulated climate proofed investments, defining targets and type of investments, policies to be developed and clear timelines and budgetary allocations- by sector/ sub-county/ ward/ sector coordination and collaboration with development partners to achieve targets / National policy alignment

Summary focus areas, targets and budgets by counties include:

Embu County: In the 2nd generation CIDP (2018-2022), Climate change has been mentioned 37 times compared to 11 times in the 1st generation CIDP (2013-2017); with more concrete plans to integrate climate change through development planning. Climate change has been framed as an economic issue, affecting food security and poverty, and hence the need for inclusion in development planning. The target sectors include agriculture, water and environment, energy, and transport; targeting drought tolerant crops, irrigation, tree cover increase and Upper Tana natural resource management, green energy and energy conservation through solar and energy efficient technology; as well as good maintenance of road network (Embu CIDP, 2018, pp 38-39, 54). The target sectors include Water and Irrigation, Environment and Natural resources with an allocation of Ksh. 81 Billion for construction of 4 mega-dams; and Ksh. 100 million for construction of a water project; Agriculture, Livestock, Fisheries and Cooperative development, the county has reported 1060Ha currently under irrigation, with a potential of 60,000Ha being put under irrigation (Embu CIDP, 2018, pp18-20). The additional hectarage would be targeted from Mbeere South and Mbeere North, which tend to be arable but semi-arid, while relying on rainfed agriculture, hence affecting food security.

The county has allocated Ksh.3.3Billion for ministry of environment as follows: participatory and sustainable environment management and conservation, Ksh.380 million; participatory forest resource management, Ksh.135 million; CC adaptation and resilience through climate smart agriculture, Ksh. 500 million and Climate information services Ksh. 37.5 million (Embu CIDP, 2018, pp 131-132). Clean energy has been targeted under rural electrification and allocated KSh. 340 million, 8,000HHs for connectivity to the grid in the 5-year period ending 2022 (Embu CIDP, 2018, pp 115). Renewable energy has been allocated Ksh. 1.025 billion, targeting 250 hybrid solar/electric streetlights, KSh. 125 million; solar pumps for 100 boreholes, KSh. 100 million; 250 renewable energy power generators, KSh. 250 million; support for 25 public institutions to adopt biogas energy, KSh. 50 million, and establishment of a solar park and mini-hydro stations at KSh. 250 million each (Embu CIDP, 2018, pp 115-116). Embu county has recorded a total of 3,750Ha of forests, both gazetted and non-gazetted, and is targeting to increase the county tree cover to 30% by 2022, including through on-farm approaches, from the current average at 17% (Embu CIDP, 2018, pp 29-32). This is recognizing the fact that lower areas of Mbeere North and South are semi-arid and have a tree coverage of about 10%; while farmlands have a tree cover of 37%. Soil and water conservation, protection of water catchment areas, promotion of nature-based

enterprises like bee keeping and protection of riparian lands are primary approaches identified in the CIDP; with support of irrigation infrastructure and agricultural extension services.

Makueni County: Climate change is mentioned 17 times in the short version (2018-2022) against 8 times in the long 2013-2017 version. Integration of climate change adaptation and mitigation strategies in the CIDP are captured in agriculture sector in promotion of drought tolerant crops, livestock marketing and fodder development, promotion of nature- based enterprises like bee keeping and strengthening of community forest associations for sustainable access to and conservation of forests. Further, capacity development and support for community level workers on construction of irrigation, water and soil conservation structures has been scheduled (Makueni County CIDP- 2018-2022, popular version, pp12-13). Establishment of an agricultural data and information management system (food and agricultural statistical and monitoring and evaluation system is factored on Makueni CIDP, pp14.) Natural resource management framework will include exploration, monitoring, and sustainable utilization of natural assets for economic production or consumption; targeted at growing forest cover in Makueni from 10% to at least 15% (CIDP, pp 15). The county has identified the risk of cyclical droughts and shrinking water sources due to encroachment and degradation of water watersheds/ towers, uncontrolled sand harvesting as both a cause and effect of climate change and has identified water resource management as a priority intervention.

Improved water governance will be supported through increased community participation in water resource mapping while there are plans to develop a county water master plan and to develop a policy on rainwater harvesting. Flagship projects for water conservation is in the form of dam construction of 6 mega dams (one per sub-county with a holding capacity of a minimum of 1 million cubic metres of water, with storage, treatment, and community water grid distribution capacity (Makueni CIDP, pp 17-22). Establishment of Climate information system has been planned for the period of 2018-2022. Reports indicate that a total of 861 Climate Information Intermediaries (CIS) were trained as a climate early warning early action mechanism, to ensure dissemination of climate messages to communities and reduce agricultural losses, contributing to sustainable consumption and Production (SCP) targets, CIDP (2013-2017). (Makueni County Climate Change Fund (MCCCF), 2018).

Makueni County Spatial Plan 2019-2029 has laid out sector strategies and flagships, under the preferred development model, in 6 core categories:1) Environment and natural resource strategy;

2) Agricultural development strategy; 3.) Economic development strategy; 4.) Settlement development strategy; 5.) Transportation development strategy; and 6.) Infrastructure and services development strategy; water catchment and riparian land protection (Makueni, CSP, 2019), pp 132-133. Quantifiable targets set include afforestation to increase the County tree cover to 20%: (10% dedicated forest cover and 10% agro-forestry); and policies around increased forest cover, sustainable forest resource utilization and biodiversity preservation (Makueni, CSP, 2019), pp 133. Green and renewable energy will be promoted. There are 4 flagships targeting natural resources in the County, namely: Large-Scale Solar Energy Generation at Kalulini/ Kavuko; Hydropower Energy Generation from Thwake Dam; Large-Scale Wind Energy Generation at Kilungu Hills and Bio-fuel generation within the bushlands (Makueni, CSP, 2019), pp 136-137. In the CIDP, a target of at least 30% HHs (15,000HHs) using solar energy for lighting and cooking, and an increase in the proportion of the population with access to electricity from 20% to 50% by 2022. Makueni CIDP, 2018, pp28, 31. Further, the Thwake Dam will provide Water for irrigation, Energy- 17.6 megawatts of electricity; as well are create jobs from construction and from operationalization; and provide opportunities for educational tourism, (Makueni, CSP, 2019), pp154).

Climate change and disaster risk reduction targets set include policies on CCA/mitigation, climate-smart agriculture; Climate-proofing of infrastructure; and climate information systems and DRR. Strategies and measures include: Increasing carbon sinks through 20% increase in afforestation and agroforestry, (Makueni, CSP, 2019), pp155; *The Makueni County Capital Investment Plan, captured in Chapter 7 of the County Spatial Plan, is* estimated to cost Ksh. 36.5 Billion, to identify and prioritize the most beneficial investments; and is a five-year plan for the funding of major purchases, land acquisitions, construction, and restoration projects. These will be funded through national government equitable share; own source revenue and donor conditional grants (Makueni, CSP, 2019), pp206-207. Conservation Strategy has been budgeted with an estimate cost of KSh. 55M, for preparation of forest management plans for all gazetted forests; Tourism and Heritage strategy, KSh. 240M; Energy and ICT infrastructure- KSh. 1.5 billion; Water, Sewer, Solid Waste Management, KSh. 1 billion (Makueni, CSP, 2019), pp218-220. Other specific targets are covered under the *Performance Contract for the Department of Water, Irrigation, Environment and Climate Change 2019/20,* pp1-23. *Makueni Vision 2025* which adopts a sectoral planning approach for sustainable growth by linking specific sectoral activities to outcomes; while the *Makueni County Spatial Plan 2019-2029* targets spatial and distributional justice, National Land use Policy implementation through detailed land use plans,

pp 110-111. *Makueni Spatial Vision* 2030 tackles: environmental destruction; transport and infrastructure services – including roads and water supply grids; land fragmentation, lack of tenure security; NRM/ diminishing forests/denudation of land; low agricultural productivity and encroachment upon public lands. (Makueni, CSP, 2019), pp109-111).

Marsabit County: Climate change is mentioned 43 times in the Marsabit 2nd generation CIDP against 35 times in the 1st generation CIDP (2013-2017). Climate change mainstreaming in the CIDP 2018-2022 speaks largely to climate change adaptation strategies under the agriculture, environment and energy sector, with emphasis being made of drought resilience, livestock disease surveillance and management, fodder production and sustainable rangeland management, as well as climate proofing infrastructure. Early warning early action strategies and rangeland management practices including observance of livestock carrying capacity, rehabilitation and expansion of irrigation schemes and animal husbandry targeting high yield livestock are among some of the adaptation strategies mentioned (CIDP, pp58). The Climate change policy and bill are planned for development in the 3rd year of implementation under CIDP II; (Marsabit County CIDP, 2018-2022, pp. 111), and these build up on the Marsabit County Climate Change Adaptation Action Plan (MCCCAAP).

Considering the Marsabit is very arid, increase in agricultural, livestock and fisheries productivity has been highlighted; while the mode of delivery is through agricultural extension services approach, value chain approach and market linkages for employment creation and income generation (Marsabit County CIDP, 2018-2022, pp. 26; p81). The identified CC adaptation and mitigation strategies like afforestation plan with an emphasis on indigenous and fast maturing tree species; policy development focusing on natural resource conservation, and alternative livelihood support, to curb unsustainable utilization of forest resources; and tapping renewable energy sources such as solar, geothermal and wind. Interestingly, the county has recognized the role of community in resource governance, and has targets to institutionalize traditional, natural resource management (NRM) governing structures i.e. *deedha* or grazing councils and environment management committees (EMCs) to promote sustainable rangeland management; and community forest associations (Marsabit County CIDP, 2018-2022, pp. 111-114). Development of water harvesting structures has been allocated KSh. 3.5B for construction of medium and mega-dams; KSh. 600 M for water tanks for rainwater harvesting; KSh. 350M for construction of 110 boreholes; and KSh. 100 M for rangeland governance and management (CIDP, pp111-113). These

resources and interventions are covered under the Ministry of Environment, Water and Natural Resources.

Renewable energy is covered under the Vision 2030 flagship projects through construction of the Loiyangalani Wind Power project that is expected to generate 310MW of low-cost energy to Kenya's national grid (i.e., approx. 15% of the country's installed capacity) (Marsabit County CIDP, 2018-2022, pp.21, 43-44). The county website reports on Kenya Off-Grid Solar Access Project (KOSAP) flagship project under the Ministry of Energy, World Bank, Kenya Power and Lighting (KPLC) and Rural Electrification and Renewable Energy Corporation (REREC). The project targets reaching 277,000HHs (1.3 million people); and a further 151 mini-grids will be constructed in 12 counties (Marsabit County Website, accessed 2021). In another component, 250,000 HHs will be targeted through solar home systems in 14 Counties; and 150,000HHs with clean cooking stoves in 8 Counties (West Pokot, Turkana, Isiolo, Samburu and Marsabit, Kwale, Taita Taveta and Kilifi). This is a Results Based Financing and Debt Facility (RBF) incentivizing private sector adoption of solar energy supported by SNV Netherland and SunFinder. Financing facilities under KOSAP inclusive Ksh. 1.2 Billion Results-Based Financing (SSP RBF) Facility for Solar Service Providers; Ksh. 3 billion for Solar Service Providers; and Ksh. 0.5 Billion Challenge Fund and Results-Based Financing (RBF) Facility (KES 0.5 billion) for Clean Cooking Solutions Service Providers (CCS SPs). This is one county that has a high-level target for private sector engagement through technological interventions.

The CIDP is aligned to the Frontier Counties Development Council (FCDC) bloc and Regional Development Authority Plan (ENNDA). Through this, the county is collaborating with ENNDA in Marsabit Catchment Conservation Programme (MCCP), Laisamis Solar Power Integrated Development Project (LSPIP), Chalbi Desert Integrated Development Programme, and integrated investment plans for border towns including Moyale. Sustainable consumption and production patterns (SCP) are just mentioned in relation to SDG goals, but have not been articulated well (CIDP, pp49). There are plans for a comprehensive afforestation and sustainable natural resource governance with an emphasis on indigenous tree species; by enacting bills that support natural resources conservation measures; and creation of alternative livelihood sources to curb negative coping strategies like charcoal burning, (Marsabit CIDP, 2018-2022, pp27-28). These interventions will target land degradation, overgrazing due to exceeding livestock holding capacity, deforestation, unstainable resource extraction. Majority of the resource have been allocated to Lands, Physical Planning, Energy and Urban development, Ksh72.520 billion

(41.3%); while only 3.3% has been allocated to Agriculture, Livestock and Fisheries Development; and 5.5% to Water, Environment and Natural Resources (Marsabit, CIDP, 2018-2022, pp134).

Tharaka Nithi County: In the 2nd generation CIDP, climate change is mentioned 37 times up from 23 mentions in the 1st generation CIDP. There is an indication of increased public and stakeholder participation in the 2018-2022 CIDP. Technical support was from NEMA and USAID- AHADI (governance and climate change experts), and the technical working groups; unlike the 1st generation CIDP which largely talks about government and consultants from the Kenya School of government. There is also greater reference to national, regional and global frameworks including but not limited to the National Ending Drought Emergency (EDE) 2017-2022, The National Spatial Plan (2015-2045), The Green Economy Strategic Plan (GESIP); The Agenda 2063 *(The Africa We Want)* and the SDGs- 2015-2030 (T/Nithi, CIDP,2018-2022, ppviii-xviii, 55, 57).

The CIDP has identified that T/Nithi forest cover is at 19.5%, with 44,617ha gazetted and 3,344ha non-gazetted forests. This is above the national target of 10%, however, this is largely limited to the highlands (Chuka and Chogoria) while the lowlands have low tree cover, due to poor farming techniques and resource over- extraction, further leading to land degradation (T/Nithi, CIDP,2018-2022 pp84,87-89). The CIDP identifies the need for agro-forestry; as well community led forest protection, by tapping into non-wood/ nature-based enterprises for poverty reduction through bee keeping and basketry promotion, (T/Nithi, CIDP,2018-2022 pp28-29). Increasing drought resilience, tackling agricultural productivity, employing sustainable food production systems, addressing soil degradation, utilization of genetic resources and indigenous knowledge systems and value addition and market access are mentioned as ways to increase adaptive capacity (T/Nithi, CIDP,2018-2022 pp56- 59). This will be achieved though building human and institutional capacity for climate change adaptation, disaster risk reduction and early warning systems strengthening. Sustainable consumption and production (SCP) is mentioned in the scope of waste and chemical use, and the reduction of their release to air, water and soil; while there is a target to halt biodiversity loss by 2020, and prevent extinction of threatened species, (T/Nithi CIDP,2018-2022 pp58). The target for biodiversity loss is not clearly articulated in terms of what or how it will be achieved.

Low renewable energy use has been identified as a challenge, with over reliance on fuelwood, 89%, charcoal, 8%; and very low access to electricity, 8% and LPG, 1%, KNBS, cited in T/Nithi, CIDP, 2018, pp16-17. Further, there are targets to increase access to affordable and reliable energy through the Rural Electrification Programme, (T/Nithi CIDP,2018-2022 pp, 57, 85, 130). Renewable energy has been allocated Ksh. 3.9B, to be split between electricity, Ksh, 800M; and renewable energy; Ksh. 800M; improving power reliability, Ksh. 500M. The targets are not very clear in terms of number of households or institutions to be reached, as they are counted together (T/Nithi CIDP,2018-2022 pp136). However further review indicates that the allocation is for a survey to set up a substation and civic education on alternative energy use, and to promote renewable energy use (T/Nithi CIDP,2018-2022 pp307).

Climate change resources are budgeted in the CIDP 2018, pp97-103; targeting carbon credit systems, waste management, irrigation and water harvesting systems, tree planting. Water and irrigation sector has been allocated Ksh. 4.9B; Irrigation and drainage services, waste and waste-water management, Ksh.13.15B. The target to increase area under irrigation to 20,000Ha is a direct target to improve food security, reach EDE targets by promoting adaptive capacity for farming communities. Forestry programme has been allocated Ksh. 537M, Solid Waste Disposal and Management Programme, Ksh. 251M; Climate Change Programme, KSh. 1B. The CIDP has identified staff training and capacity building on climate change and disaster preparedness, setting aside Ksh. 15.5 M for EDE and early warming messages, (T/ Nithi CIDP, 2018-2022, solid waste disposal, Ksh. 100M for natural resource mapping, training teachers as CC champions, pp144; 230; 231-232; 247-249.

Turkana County: In the 1st generation CIDP, climate change has been mentioned 27 times, while the 2nd generation CIDP it is mentioned 55 times. The 2nd generation CIDP has strongly articulated a transformative agenda for the county through a 5-point Agenda of the Governor's manifesto while making reference to national (Ending Drought Emergencies, Kenya's Vision 2030 and the Big Four Agenda), continental (Africa's Agenda 2063) and global (SDGs and multi-lateral environmental agreements); contextualized through root-cause analysis While the CIDP had not been published online as at end of January 2020, which raises issues delays in access, due credit must be given in terms of the quality of the CIDP, which is very well articulated.

Turkana CIDP (2018) has made extensive reference to green energy sources like geothermal power, solar energy, wind power; and has reference targets for utilization of these sources. For

instance, under the *Kenya Off-Grid Solar Access Project for Underserved Counties* by the World Bank there are targets for universal access through mini-grids for 500,000 people in urban settlements; solar systems for secluded households, enterprises, manufacturers, water pumping, and government buildings; targeting 36 sites (Turkana CIDP, 2019, pp 61). Further, under *Kenya's Least Cost Power Development Plan 2011-2030,* geothermal power is expected to contribute 26% (or 5530 MW) of the total system peak demand by 2031; under which two sites (the Barrier Volcano and Namarunu,) have been identified (Turkana CIDP, 2019, pp 61).

Further to this, there was a clear articulation of flagship projects, and a relevant one was the target for green energy production from geothermal and solar energy financed through Public Private Partnerships (PPPs) (Turkana CIDP, 2013, pp xxii). The Energy Directorate plans to increase energy efficiency through installation of standalone solar systems in 105 public institutions, geothermal energy exploration by Olsuswa Energy Company; development of the Turkana County Energy Sector Plan with support from GIZ; Partnership with REA for electricity generation through mini-grids; and solar installation of streetlights in 8 towns and 4 rural centres (Turkana CIDP, 2018-2022, pp136-137).

Climate mitigation through afforestation; and climate risk management through drought and flood early warning systems (EWS) are planned for through livestock insurance and disease surveillance and control. Crop production will be supported through flood-based farming systems (FBS) which increases area of land and irrigation and taps ground water run-offs for crop production and rehabilitation of degraded land (Turkana CIDP, 2019, pp 73). The CIDP has further identified unsustainable land management practices as a key cause and result of climate change and environmental degradation; among them mining, oil and gas extraction, overgrazing, and over-extraction of wood fuels (Turkana CIDP, 2019, pp 60-69).

4.5.3. Financial and Resource Capacity

This section is informed by the review of the CIDPs and budget plans for the counties to gauge resource allocation for environment and agriculture sector. It is also informed by the equitable share allocated by the national government to the counties. Most counties are unable to meet their revenue collection targets, with 76% county budgets being financed by the national equitable share and by development funding through conditional grants. Below is a trend analysis of county government funding sources for the period of 2013-2019, Table 4.5.

Table 4.4 Summary of Funds to Counties for the period 2013-2019

Summary of Funds to Counties

Financial Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Total (in Ksh. Billion)	As % of Total Available Funds
Total Funds Available to Counties	224.2	304.78	343.18	369.45	387.09	445.36	2,074.06	100%
Total Disbursements by OCOB	174.4	262.3	303.47	369.45	324.12	405.17	1,838.91	89%
Equitable Share of Revenue	193.4	226.66	259.77	280.3	302	314	1,576.13	76%
Conditional Grants	20	2.6	21.9	21.9	26.85	35.98	129.23	6%
Total Expenditure	169.4	258	295.3	319.06	303.83	376.43	1,722.02	83%
Recurrent	132.8	167.56	191.85	215.71	236.94	269	1,213.86	59%
Development	36.6	90.44	103.45	103.34	66.89	107.44	508.16	25%

Source: County Governments Budget Implementation Review Report, OCOB - cited in *(KIPPRA, 2020)*

Of the total funds available to county governments (KSh. 2,074 billion), between 2013-2019, 59% went to recurrent expenditure, while 25% went to development spending. Of this, 76% was equitable share while only 6% was conditional grants. This is an indication that counties have not optimized conditional grants available from development partners, with only 6% being conditional grants; either due to lack of knowledge of their availability, or lack of capacity to develop bankable proposals or negotiate funding. At this point, the study has not reviewed the type and nature of development projects that are being implemented at county level. However, anecdotal evidence shows infrastructural developments like hospitals, classrooms, market structures etc. are more preferred even by communities; as well as repair of or development of infrastructure where there was none. The total disbursements to counties are 89% of the total available funds to counties; and only 83% of the available funds were actually spent. While development expenditure is a mere 25%, there is an opportunity to increase this by improving absorptive capacity of counties for development funding. However, delayed disbursements by the National Treasury poses a great challenge in absorption of development funding.

Table 4.5 County Total expenditure against Own Source Revenue

County Total expenditure against Own Source Revenue (OSR)							
Financial Year	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**Source**
Own Source Revenue (OSR)- Billion (Ksh)	26.3	33.85	35.02	32.52	32.49	40.3	County Governments Budget Implementation Review Report, OCOB - **cited in** https://kippra.or.ke/index.php/resource-centre/blogs/161-revenue-sharing-stalemate-between-national-government-and-county-governments
Target OSR- Billion (Ksh)		50.38	50.51	57.66	49.22	53.86	
Total Expenditure- Billion (Ksh)	169.4	258	295.3	319.06	303.83	376.43	
OSR as a Percentage of Total Expenditure (%)	15.53%	13.12%	11.86%	10.19%	10.69%	10.71%	

A trend analysis of the county budgets indicates a declining percentage of Own Source Revenue (OSR) as a percentage of the total expenditure from 15.5% in 2013/14 to 10.7% in 2018/19; with a fluctuation in the absolute values in monetary terms of the OSR by counties. This is necessitated by decline of national revenue collections and increase in national debt-service ratio as result of increased government borrowing. According to a KIPPRA report, a stalemate between the National Assembly and the Senate and Commission of Revenue Allocation (CRA), ensued under the Division of Revenue Bill (DoRB) 2019. This was due to disagreement, where the National Assembly proposed Ksh 310 billion (29.8%) against 2014/15 base year (Ksh 1,038 billion), as opposed to Ksh 335 billion (32.3%) proposed by Senate and CRA against 2018 base year (314 billion), (KIPPRA, 2020). A similar stalemate was experienced in 2020, with counties fighting for a bigger share, based on new proposed revenue sharing formula, including population and land size.

Of the allocation to the counties, a review was conducted of the allocation to Environment and Agriculture ministries, which are anticipated to carry most of the climate governance functions. For the 2018-2022 period, the highest allocation to the environment sector was in T/Nithi (29.7%) and Makueni (22%), while the lowest was in Marsabit (5.48%). Similarly, highest allocation to the agriculture sector was in T/Nithi (17.6%) compared to the other 3 counties (Embu, Makueni and Turkana) at 8%, while the lowest was in Marsabit (3.32%). This gives a proxy indication of the county's financial capacity to invest in climate mitigation but doesn't rule out climate investments through other sectors like energy. For Turkana county, flagship budget accounts for 17% (Ksh. 24.780 Billion) of the total share of the budget, and is inclusive of cross-sectoral integrated flagships, some of which have climate change investments. For Marsabit county, for 2018-2022 period, Ksh. 5.6 billion has been allocated for drought emergency, resilience and renewable energy interventions. A review of resource allocation by county is on Table 4.7.

Table 4.6 County Allocation by Sector and Expenditure Type (2013-2017 & 2018-2022)

Sector	Period	Recurrent Budget	Development Budget	Total Budget	%Share of Total
Embu County					
Lands, Water, Environment and Natural Resources	2018-2022	No summary		8,265,100,000	**12.21%**
	2013-2017	290,969,889** (expenditure)	631,444,363** (expenditure)	922,414,252	**4.35%**
Agriculture, Irrigation, Livestock, Fisheries and Cooperative Development	2018-2022			5,559,600,000	**8.21%**
	2013-2017	718,523,731** (expenditure)	264,003,984** (expenditure)	982,527,715	**4.63%**
Makueni County					
Environment Protection, Water and Natural Resources	2018-2022	1,041,727,112	17,283,750,000	18,325,477,112	**22%**
	2013-2017	622,045,829	2,482,939,447	3,104,985,277	**10%**
Agriculture, Rural & Urban Development	2018-2022	1,291,022,436	5,024,750,000	6,315,772,436	**8%**
	2013-2017	1,165,480,892	1,635,761,582	2,801,242,474	**9%**
Marsabit County					
Water, Environment and Natural Resources	2018-2022	Not available	Not available	9,600,000,000	**5.48%**
	2013-2017	Not budgeted	Not budgeted	925,0000	
Agriculture, Livestock and Fisheries Development	2018-2022	Not available	Not available	5,816,600,000	**3.32%**
	2013-2017	Not available	Not available	484,100,000	
T/Nithi County					
Tourism, Environment Natural Resources and Water Services	2018-2022	Not available	Not available	25,029,000,000	**29.7%**
	2013-2017	Not available	250,689,864** (expenditure)	Not available	**5%***
Agriculture, Livestock and Fisheries Development	2018-2022	Not available	Not available	14,820,000,000	**17.6%**
	2013-2017	Not available	530,294,406**(expenditure)	Not available	**12%***
Turkana County					
Water, Environment and Natural Resources	2018-2022	Not available	Not available	11,704,000,000	**8%**
	2013-2017	Not available	Not available		
Agriculture, Pastoral Economy and Fisheries	2018-2022	Not available	Not available	11,373,000,000	**8%**
	2013-2017	Not available	Not available		

Key: *Development expenditure only

** expenditure

Below is summary analysis by county for the environment and agriculture sector:

Embu County: For the period 2018-2020, Lands, Water, Environment and Natural Resources received 12.21% allocation (Ksh.8.265 billion), while Agriculture, Irrigation, Livestock, Fisheries and Co-operative Development received 8.21% allocation (Ksh. 5,559,600,000). It's important to note that for 2013/14, Lands, Water, Environment and Natural Resources was not allocated any budget, but this changed in subsequent years, with a 4-year expenditure of KSh. 290,969,889 (1.77%) of the budget (Embu CIDP, 2018, pp 71). The ministry of Agriculture had received Ksh.

982,527,715 (4.63%) for the 2013-17 period; with a subsequent increase in allocation to 8.2%; and in absolute terms as the overall budget increase.

For the 2013-2017 period, budget allocation was split as 77.45% for recurrent expenditure, and 22.55% for development expenditure against a target of minimum of 30% allocation to development expenditure, as required under PFM Act 2012 (Embu CIDP, 2018, pp 66-67). The actual expenditure for the period of 2013-2018 is Ksh.21.208 Billion against a revised budget estimate of KSh. 27.677 billion; and with a budget absorption rate of 76.71%, with the highest absorption rate in 2017/18 at 81.9%. In this period, recurrent expenditure's absorption rate was 90.4%, with a total expenditure of Ksh. 16.426 Billion; comprising of personnel emoluments, operations and maintenance. Development expenditure accounted for only Ksh. 4.781 Billion, against revised targets of Ksh. 9.478 Billion, accounting for 50% absorption rate for 2013-2018 financial period (Embu CIDP, 2018, pp 68-73).

Makueni County: For the period 2018-2022, Environment Protection, Water and Natural Resources received 22% allocation (Ksh.18.325B); and Agriculture, Rural & Urban Development 8% allocation (Ksh. 6.315 B). This was an increase from the 2013-2017 allocation Environment Protection, Water and Natural Resources, which received 10% allocation (Ksh. 3.104 b), and Agriculture, Rural & Urban Development 9% allocation (Ksh 2.801B)- of the total Ksh 30.960B allocated for the period, (Makueni CIDP, 2013-2017, pp82). Cumulative absorption rate for recurrent budget was 71% and 67% for development budget for Makueni County; with a total expenditure of Ksh. 1.471B for Environment and KSh. 1.086B Agriculture sector- for development budgets only (Makueni CIDP, 2018, pp 46-48). The CIDP 2018-2022 is projected to cost Ksh. 82,588 billion, and will be financed by equitable share, Ksh.45.9 Billion (56%); Own Source revenue (OSR)- Ksh. 3.7 billion-(5%); and conditional grants, Ksh. 2,54 billion-(3%), and with a Ksh. 30,319, billion (37%) estimated revenue gap. This indicates an increase in the amount allocated for environment in percentage terms and absolute terms, and a 1% percent reduction for Agriculture, through a major increase in absolute terms.

Marsabit County: For the period of 2018-2022, majority of the resources have been allocated to Lands, Physical Planning, Energy and Urban development, Ksh72.520B (41.3%); while only Ksh. 5.816B (3.3%) has been allocated to Agriculture, Livestock and Fisheries Development; and Ksh, 9.6B (5.5 %) has been allocated to Water, Environment and Natural Resources (Marsabit, CIDP, 2018-2022, pp134). The total CIDP budget is KSh. 175,2B; with a KSh. 132.647B (75.67% of

total budget) deficit; while revenue projections are Ksh. 42.645 billion. Climate change has been factored and budgetary allocation for formulation of climate change legislation (policy and bill) of Ksh. 4 million has been scheduled for financial year 3 (2020/21) (Marsabit CIDP, 2018-2022; pp 111). Capacity building on climate change, and support for action plans and development of guidelines for climate change mainstreaming in projects and programmes was set for the first 2 financial years under the 2nd generation CIDP. The flagship and transformational projects that have been factored in the CIDP for the 2018-2022 period are Water and Sewerage systems for both Moyale and Marsabit town at a cost of Ksh. 4 billion (Marsabit CIDP, 2018-2022; pp 115).

The rest are drought emergency, resilience and renewable energy interventions costed at Ksh. 5.6 billion; to be implemented by NDMA and energy, urban planning and environment sectors, with allocations per intervention spread out over the five- year period (Marsabit CIDP, 2018-2022; pp 111-114). For the 2013-2017 period, it is interesting to note that there was no money budgeted for under the Water, Environment and Natural Resources, however, and expenditure of KSh. 925 million was incurred for the same period; while for Ministry of Agriculture, Livestock and Fisheries Development, there was a budget of Ksh. 822.5 million and a corresponding expenditure of 59% of the budget (Ksh. 484 million) (Marsabit CIDP, 2018-2022; pp 51). These allocations to the two ministries are relatively low compared to the level of climate risk experienced in the county; hence are inadequate for CCA interventions.

T/Nithi County: For the 2018-2022 period, Tourism, Environment Natural Resources and Water Services received approx. Ksh. 25.029 billion (30% of the budget share) while Agriculture, Livestock and Fisheries Development received approx. Ksh. 14.82billion (17% of the budget share) of the total Ksh. 84.3 billion for the period. There was no breakdown between recurrent and development expenditure (T/Nithi CIDP 2019, pp157). Renewable energy has been allocated Ksh. 3.9B, to be split between electricity, Ksh, 800M; and renewable energy; Ksh. 800M; improving power reliability, Ksh. 500M. Climate change resources are budgeted in the CIDP 2018, pp97-103; targeting carbon credit systems, waste management, irrigation and water harvesting systems, tree planting. Water and irrigation sector has been allocated Ksh. 4.9B; Irrigation and drainage services, waste and waste-water management, Ksh.13.15B. The target to increase area under irrigation to 20,000 Ha is a direct target to improve food security, and reach ending drought emergency (EDE) targets by promoting adaptive capacity for farming communities. Forestry programme has been allocated Ksh. 537M, Solid Waste Disposal and Management Programme, Ksh. 251M; Climate Change Programme, KSh. 1B. The CIDP as

identified staff training and capacity building on climate change and disaster preparedness, Ksh. 15.5 M, for EDE and early warning messages, (T/ Nithi CIDP, 2018-2022, solid waste disposal, Ksh. 100M for natural resource mapping, training teachers as CC champions, pp144; 230; 231-232; 247-249. For the 2013-2018 period, recurrent expenditure was 66% (Ksh. 11.219 billion), while development expenditure accounted for 34% (Ksh. 4.593 billion) of the total budget of Ksh. 15.812 billion); with agriculture getting 12% (Ksh. 530.2 million) and Tourism, Environment, Natural Resources and Water Services getting 5% (Ksh 250.6 million share of the development expenditure (T/Nithi CIDP 2019, pp 67-70). There is a big increase in allocation to environment sector, showing an increased recognition for the need to improve adaptive capacity.

Turkana County: For the 2018-2022 period, Water, Environment and Mineral resources received 8% (KSh. 11.704 billion), while Agriculture, Pastoral Economy and Fisheries received 8% (KSh. 11.373 billion). Under Water and Environment department is water services and water service boards, environment, mineral and petroleum resources. Under department of Agriculture, there are two directorates, providing Fisheries, Livestock and Veterinary services; and Agriculture and Land Reclamation, including irrigation (TCG, CIDP, 2019, pp392). The Department of Tourism Culture and Natural resources also oversees forestry and wildlife and received 3% (Ksh. 3.717 billion) of the budget. Disaster management falls under the Public Service, Administration and Disaster management which cumulatively received 18% (KSh. 27.406 billion). The Flagship budget accounts for 17% (Ksh. 24.780 Billion) of the total share of the budget and is inclusive of cross-sectoral integrated flagships (TCG, CIDP, 2019, pp393-394).

The total budget projections for the 2013-2018 period were KSh. 78.359B, with 72.26% being expected from the national government, 16% through grants, bilateral funding, PPPs and other development partners; 1.2% from the Equalization Fund, (TCG, CIDP, 2013, pp88). There is no consolidated budget for Agriculture and environment; however, comprehensive budget allocation by sector is covered for Energy, Environment and Natural Resources on TCG, CIDP, 2013, pp121-142; and Agriculture, Pastoral Economy and Fisheries, (TCG, CIDP, 2013, pp102-112). Allocation for the 2013-2017/18 period included Ksh 22.2B to Drought Risk Reduction (DRR), Climate Change Adaption (CCA), social Protection and End Drought Emergency (EDE); broken as follows: 2013/14- KSh 2.0B; 2014/15- KSh. 4.952B; 2015/16- KSh. 5.405B; 2016/17- KSh.4.776B and 2017/18- KSh.5.243B, though the NDMA, (TCG, CIDP, 2013, pp141).For the 2013-2017/18 period some of the target indicators included number of CC policies and number of

people educated on climate change mitigation and adaptation; as well as climate mitigation forums conducted and adoption of climate smart agriculture by HHs, TCG, CIDP, 2013-2017 pp195-196).

4.5.4. Technological Capacity

The Kenya Vision 2030 and National Climate Change Action plan (2015-2030) articulates the need for adoption of a low carbon development pathway. This can be achieved through public private partnerships between the government and private sector, and with climate finance. The capacity for this is dependent on policy support, ability to link potential investors with climate investment partners financing models and sensitization of the different sectors to adopt relevant technologies. Technology can be in any sector, e.g. agriculture, transport, energy and manufacturing and includes investments like solar irrigation and pumping systems, solar driers and coolers, improved cook-stoves, solar heating and lighting systems, etc. Technology being broad, this section will only focus on a few examples to show where gaps and strengths lie in technology transfer.

For agriculture sector, drought risk management is very key given the high drought frequency and associated losses. In Kenya, only 0.6% of total agricultural land area is under irrigation infrastructure (FAO as cited in The Economist, 2019 Global Food Security Report), despite having unpredictable rainfall patterns, increased drought frequency, and intense rainfall resulting to infrastructural, property and crop damages (GoK, NCCAP 2018-2022, pp1-3). Secondly, crop and livestock insurance are one of the ways for climate risk management, and to improve adaptive capacity for marginal mixed farmers and pastoralists, especially in the face of recurrent droughts. In the ASALs in Northern Kenya, there has been a move to promote Index-Based Livestock Insurance (IBLI) by ILRI in partnership with Equity bank for Marsabit and Turkana since in 2010. However, uptake has been low due to among others due to low understanding of how the insurance works, high pricing, and limited scope of insurance cover, (MCCCAAP, 2019-2023, pp39). Insurance is supposed to cushion farmers and pastoralists in case of a climate shock.

There is a strong nexus between energy, climate change and food security. Achieving SDG 7 on affordable clean energy for all will catalyze poverty eradication, gender equality, food security, health, education, sustainable cities and communities, clean water and sanitation, transport and job creation, (UN, 2021). Energy demand is expected to increase 60% by 2040, and of which 85% will be from developing countries. In Kenya, 71% of households (HHs) use woodstoves with 92%

of these being rural HHs. There is an estimated 17.8% increase in charcoal demand by 2032: widening the supply-demand gap from 8.9 million M^3 to 10.6 million M^3 (Ministry of Energy, 2020), pp13. This can be only met through mass adoption of clean-green technology. Reports indicate that currently, there is 17% renewable energy consumption globally, against a 85% target by 2050 set by the IPCC to reduce adverse impacts of climate change; 3 billion (>40%) of global population rely on non-renewable energy; and energy supply accounts for around 60% of GHG emissions (UNDP website, accessed 2021).

Technological transfer for energy sector has largely been through public private partnerships, e.g. though Results Based Financing and Debt Facility (RBF) incentivizing private sector investments through foreign direct investments and partnerships including development partners. Quite a number of flagship projects exist, like the Lake Turkana and Loiyangalani Wind Power (Marsabit) Wind Power initiatives, the geothermal power initiatives by GDC, and the World Bank *Kenya Off-Grid Solar Access Project for Underserved Counties* (KOSAP) targeting 14 counties. These were largely spearheaded at the National Level through the Kenya Vision 2030. However, there isn't much evidence of coordinated government led technology support for other counties for large scale technology adoption, especially targeting other counties under this study. Capacity for county governments to negotiate for and plan for climate investments seem low, as they lack such strategies. This is collaborated by a report on Climate Readiness that indicates that African countries lack negotiation and bargaining power in global climate governance and have low capital readiness of 0.35 against a global average of above 0.50 (KPMG, CRI 2019), pp17 &26.
For both cases identified in this study, deliberate planning, resource allocation and inclusion of targets in the county CIDPs and alignment to the Kenya Vision 2030 goals contributed to the success.

Marsabit County Case: has leveraged on private sector engagement through technological interventions. This is due to intentional planning under development planning. Renewable energy is covered under the Vision 2030 flagship projects through construction of the Loiyangalani Wind Power project that is expected to generate 310MW of low-cost energy to Kenya's national grid (i.e., approx. 15% of the country's installed capacity) (Marsabit County CIDP, 2018-2022, pp.21, 43-44). The Kenya Off-Grid Solar Access Project (KOSAP) flagship project under the Ministry of Energy, World Bank, Kenya Power and Lighting (KPLC) and Rural Electrification and Renewable Energy Corporation (REREC) targets reaching 277,000HHs

Turkana County Case: There was deliberate articulation of flagship projects, and a relevant one was the target for green energy production from geothermal and solar energy financed through Public Private Partnerships (PPPs) (Turkana CIDP, 2013, pp xxii).Turkana CIDP (2018) has made extensive reference to green energy sources like geothermal power, solar energy, wind power; and has reference targets for utilization of these sources. For instance, under the *Kenya Off-Grid Solar Access Project for Underserved Counties* by the World Bank. Under *Kenya's Least Cost Power Development Plan 2011-2030*, geothermal power is expected to contribute 26% (or 5530 MW) of the total system peak demand by 2031; under which two sites (the Barrier Volcano and Namarunu,) have been identified (Turkana CIDP, 2019, pp 61).

Study respondents indicated low for capacity for technology transfer due to lack of capital investments, low private sector engagement and motivation for participation in policy process, and lack of partnership opportunities to support renewable energy investments. This is coupled with the stiff competition for green capital mobilization for sustainable energy technologies.

"There is no business case or proposals for private sector engagement, like partnerships to provide climate smart technologies, or even space for engagement of private sector in policy process. The core interest of private sector is to make profits. There is need to identify opportunities for investments and partner with companies that provide these technologies."

KII, International Climate Change Expert

"Local business development remains a core priority and the competition for the few investment deals has translated to a need for all businesses (regardless of size and stage) to provide investors with a stronger business case to conduct longer and more detailed proof of concept and validate more certain paths to profitability in order to be considered investment ready."

Development Partner, Climate Investments

On renewable energy targets, Kenya joined the Sustainable Energy for All (SE4ALL) Initiative in 2014 and developed its national SE4ALL Action Agenda and Investment Prospectus with country targets for achieving universal access to modern energy access services by 2030. Kenya's National SE4ALL targets by 2030 are 2.8% annual reduction in national energy intensity and contribution to 30% GHG emission reduction by 2030 relative to Business as Usual (143 MtCO2e); as well as achievement of national SDG Goal 7 by 2030 (Kenya SE4ALL National Agenda, 2016, cited in *Kenya National Energy Efficiency and Conservation Strategy,* (Ministry of Energy, 2020), pp4). However, indications that mainstream energy institutions are tightening the noose on other renewable energy companies as they are losing big markets especially by some industries shifting

from electricity use to photo-voltaic (PV) sources, through advocating for policy measures perceived to be too punitive or restrictive. There is a perceived trend that they may undermine off-grid energy applications (for instance, the government increased VAT and import tariffs for solar materials and equipment in July 2020:

"A solar water pump innovator in Kenya reported the tax exemption process recently changed with limited warning and clarity, causing delays in clearing shipments of solar PV panels and controllers. ……. an agricultural processing innovator based in Kenya found that although solar PV equipment is exempt from value-added tax (VAT), if a consignment also includes other product components like batteries or charge controllers, all contents are taxed. …"

Development Partner, Climate Investments

4.5.5. Climate Resilience and Adaptive Capacity

Climate Risk Management and Disaster Risk Reduction (DRR) strategies strengthen the capability of institutions and communities respond to, adapt to and bounce back from climatic shock. For this study, proxy indicators for adaptive capacity is through institutional capacity to anticipate and prioritise climate risk, develop and implement climate policies, manage climate finance, and respond to climate vulnerabilities. Based on the systems theory, and the assumption that different parts of the governance system come together for optimal policy outcomes, a rating scale was developed using the county CC ratings on weather and environment; with reference to Climate risk profiles by CGIAR and other secondary data on population density, and potential climate severity as a function of ability to respond to a shock given the allocated resources.

The risk of a county to climate change is exacerbated by the climatic conditions, relative to the population, and resource allocation for adaptive measures. The higher the likelihood of occurrence, and the higher the population, the higher the severity of the risk, especially with low adaptive capacity for early warning and early action measures. Climate risk profiles for the target counties have been discussed extensively in section 1.1.2. Majorly for the target counties, climate interventions have been reactive instead of proactive. For instance, counties and development partners conduct humanitarian response after a shock, as compared to integrating humanitarian work into development interventions.

Based on these factors, the highest risk is in Turkana and Marsabit as they are likely to bear a very high cost in case of a climatic shock, given the low resource allocation by the county in the CIDP

to address climate governance/ environment issues. While Makueni has a high population and high-risk rating, the county has made some effort to allocate quite a substantial amount of resources for climate governance. Similarly, Tharaka Nithi and Embu County have a moderate climate risk rating, but the T/Nithi has allocated more resources, lowering its absolute risk in case of a shock. Table 4.8. shows key climate drivers and summary analysis to give a basic perception of climate risk by county, given climatic conditions and allocation of resources for climate governance.

Table 4.7 Climate Risk Profile Summary by County

County	Population	Risk Profile- weather/ environment	Risk relative to Popn/ Weather	Climate/ Env. Finance relative to Total Budget	Formula	Absolute Rate (C*E)/D
Embu	608,599	**H**	**Mo**	**Lo - 12%**	(4*3)/2	6
Makueni	987,653	**H**	**Mo**	**VH- 22%**	(4*3)/5	2.4
Marsabit	459,785	**VH**	**H**	**Lo- 5.5%**	(5*4)/2	10
T/Nithi	393,177	**H**	**Mo**	**VH- 29.7%**	(4*3)/5	2.4
Turkana	926,976	**VH**	**VH**	**Lo -8%**	(5*5)/2	12.5

Source: Author's extrapolation based on study findings

Formula= (Risk profile (weather/Env.) * Risk rel. to Population/weather)/Climate Finance relative to Total budget= Absolute Rate

Key

Risk Rating	Weight
VL- Very Low	**1**
Lo - Low	**2**
M- Moderate	**3**
H- High	**4**
VH- Very High	**5**

4.6 Enablers and Barriers Climate Governance

This section seeks to identify the enablers and barriers to CC governance. These are the factors that contribute to or inhibit climate policy development/ domestication/ implementation, based on cases study review from target counties e.g., development support, existing toolkits, or trainings offered to county staff to strengthen capacity for climate governance systems, which can be used to inform set up by other counties or partners engaged in climate governance.

4.6.1 Enablers to Climate Action

Technical and Financial Capacity Development Support: The first phase of devolution (2013-17) was marred by low technical and organizational capacity, and lack of clear guidance on development planning, this resulted in misplaced priorities and poorly developed CIDP. However, things are slowly changing. Governments are learning from each other, and from development partners and civil society. The Council of Governors (CoG) and Ministry of Devolution and Planning, the Kenya School of government and the Vision 2030 secretariat developed, "*Guidelines for Preparation of County Integrated Development Plans (Revised), 2017"*, (Ministry of Devolution and Planning, 2017)*;* and took a focal position in technical support to counties. These guidelines established strategic priority initiatives to contribute to national goals, (Vision 2030, MTP 3 and the Big Four Priorities and Actions, and the EDE CPF 2022), African Agenda 2063, and international goals (SDGs). This was done through broad consultation articulated through sectoral plans, sectoral flagships, and public participation. Consequently, support for 2nd generation of CIDP Guidelines, and performance monitoring tools that led to integration of climate change in development planning (UN-Habitat, 2019), pp6.

Review of other cases on technical support showed that the main challenges identified by development partners offering technical policy support for climate change policy and natural resource governance in the 3 Counties (Embu, Kitui and Tharaka Nithi) to the policy and laws formulation process included lack of expertise, inadequate funding, lack of close cooperation and interlinkages among relevant departments and ministries. However, through the project, PACJA; financed by Trócaire conducted sensitization meetings and shared content to build partners' and duty bearers' capacity on climate governance and support counties to establish County Climate Change Fund (CCF) legislations to enable them tap into the available global climate financing. The climate forums conducted at the county level encouraged multi-stakeholder participation, through ensuring representation from different government ministries, departments and agencies; and other civil society and non-state actors at the county and national level. Working in clusters of counties under same geo-focus, not only created motivation for counties to move at the same pace, but also created peer pressure and reduced costs for offering technical support; through joint trainings and/ visits reducing administrative support costs. This maximized value for money, in terms of hiring technical experts to support, and drawing on lessons across counties. While Kitui County was not part of the study, indications are that as a result of being in the project consortium under Trócaire Climate Change Project, they achieved success in the following policy adoption

just like their peers: The Kitui County Climate Change Fund (2018) was passed and launched in August 2018; the Kitui County Energy master plan (2018) was developed and rolled out.

Performance Contracting: Makueni County has adopted performance contracting between the Governor and various departmental county executives to ensure that the mandates of the departments are delivered according to public expectations. The CECs sign a statement of intent to support the delivery of the performance targets as espoused in the Kenya Vision 2030, Makueni County Vision 2025 and CIDP 2018-2022, and submit quarterly reports against the targets. An example if the performance contract for Financial Year 2019/2020 with the CEC, Department of Water Sanitation, Environment and Climate Change, which had targets to reduce distance to safe water within 2Km, improve water governance mechanism and improve water catchment management, conservation and climate change resilience. This is supported further by making these contracts public in line with the Access to Information Act (ATI), 2016, with the sharing of the contracts and reports on the county website.

The performance contract assigns a scoring matrix against each of the performance indicators, general, and specific to the core mandate of the county department. Under the core mandate, the delivery against the flagship project includes a feasibility study for the mega dams; while other non-flagship projects relevant to climate change and environment include: Climate change adaptation and resilience building: efficient use of climate change fund, climate change initiatives resource mobilization -30%; and finalizing the Climate change legal framework-policy and bill 70%; Water Governance mechanism: through sensitization on county water policy and establishment of community water schemes; Legal frameworks: Implement the water policy-25%; finalize environment and Climate Change policy-25%; Develop the departmental County Sectoral Plan- 40%; Complete the amendment of the Sand Act and Regulations -10%; Environmental conservation and management: forest, water user and sand conservation technical capacity building and support (Makueni County Spatial Plan , 2019-2029). This explicit target and information sharing including project name, sites, budgets and expected completion dates promotes open government, which enables to public to hold the government to account on service delivery, while creating forums for the interaction between the government and the citizenry. This is supported by Monitoring and Evaluation Systems, with clarity on policies and definitive targets to be achieved in planning documents are key to monitoring progress against implementation targets. Makueni county government intends to develop an M&E policy in line with National and County Integrated M&E systems (NIMES & CIMES) guidelines. Oversight for reporting will be

guided through institutional structures like M&E Unit, County M&E Committee, M&E Technical Oversight and Sector M&E Committees, Sub county, Ward , Sub Ward development committees, and project management committee for every project and programme and County Citizens Participation Forum (Makueni CIDP, 2018-2022, pp55, popular version.

Inclusive and Open Government: Partnership and collaboration with national government, civil society organizations, private sector, development partners and the citizenry is key in climate governance. Joint identification, planning, implementation and evaluation of policies, plans, sector strategies, plans and budgets promote synergies; where different stakeholders take responsibility of delivering the different components. In counties with open and inclusive governments, this study established that there has been a higher level of adoption of policies, establishment and operationalization of governance structures, and success in terms of access to climate finance, and implementation of projects through higher resource allocation and reporting on the same to the public. This is in line with the County Government Act, 2012 Section 88, and Section 91; which promotes timely access to information for public participation, and inclusion in public participation through sector committees, technical working group and private sector and citizen groups.

Case Studies -Political Goodwill:

"The governor has been on the forefront of lobbying the county assembly to create an enabling legal and regulatory environment. …. The county is developing a policy on climate change that should lead to a Climate Change Act for the county. The county assembly continues to develop other supportive laws and regulations on environmental issues e.g., sand management…..The assembly has been very supportive in establishing an enabling legal and regulatory framework". (**ADA Consortium Report,** Peer Learning Visit to Makueni County: Learning Visit by Kwale, Narok & Siaya County Representatives)

"In Makueni, environment and climate change have been given priority and there is a Chief Officer appointed as the focal person for climate in the county. There has been a process of mainstreaming climate change in all departments, a process achieved through support from the Adaptation Consortium under the CCCF mechanism. All departments have come up with regulations for climate action e.g., civil engineering works on roads and houses should support water harvesting."

Makueni County has gone a step further to ensure county expenditure transparency and accountability through an online portal; https://data.makueni.go.ke/?d=projects; from which the public can view county allocations per sector, and project dashboards, with data up to the ward level.

Strong participatory stakeholder Model: A review of county overarching policy documents indicate some level of stakeholder engagement. However, the extent to which each of the counties was able to engage stakeholders and gather their views was dependent in their technical capacity or support to do so, or the approach used for engagement. For instance, Turkana County pursued Stakeholder Approach to Risk Informed and Evidence Based Decision Making (SHARED) methodology facilitated by World Agroforestry Centre (ICRAF) to enhance multi-stakeholder, cross-sectoral and evidence-based decision making in development of their CIDP through root cause analysis (Turkana CIDP, Popular Version, 2018, pp 26-27), ***Appendix 6.***

"This entails people-centred processes for co-learning and co-negotiation amongst key stakeholders to achieve mutually agreed upon development outcomes within the given context; gathering and analysis of evidence in an accessible form to support decision makers; sequenced interactions with key actors to use evidence in prioritizing interventions and investments and the creation of monitoring and adaptive learning plan to adopt priorities and respond to new evidence. ***Turkana County CIDP, 2018-2022, Popular Version, pp 26).***

Utilization on Policy and Planning Toolkits: Tapping into success studies, e.g., Utilization of Policy and Governance Toolkits: AHADI (Agile Harmonized Assistance for Devolved Institutions) Toolkit, also referred to as the County Governance toolkit for instance, was developed with UKaid and USAID support, to provide a unified approach to capacity development and cross-county learning on good governance and devolved government (AHADI Toolkit, 2021). The AHADI Project supported the Ministry of Devolution to roll out the County Governance Toolkit, with strategic interventions to 22 county governments, national government and CSOs, (ibid). This project targeted county capacity strengthening using the county Public Expenditure Management (PEM) as an entry point for policy and governance training; specifying roles and responsibilities of the different actors and providing useful tools and resources. Another toolkit, Agri-Policy Tool Kit provides support for agriculture sector policy advice. This draws from learning on Policy Processes in Agriculture and Rural Development (PPARD) working group based on peer-to-peer learning and exchange on policy advice in GIZ projects (SNRD Africa, 2020). This toolkit provides policy instruments to guide policy dimensions and development

objectives (SNRD Africa, 2020). Such tools ensure evidence-based policy development, while offering strategic guidance on kind on interventions to be applied for policy development, mainstreaming climate governance and NRM, soil and water conservation into development planning ***(Appendix, 5).***

4.6.2. Barriers to Climate Action and Gaps in Policy Adoption

Institutional Memory Loss: Climate governance involves working at macro, meso and micro levels, with national, county and grassroots networks to align domestic efforts for addressing climate change and promoting community resilience. Negotiations and consensus building play a key role in policy process. Frequent or unexpected cabinet or staff reshuffles between government ministries and departments throws the policy process off momentum; especially where new appointees are not willing to continue the legacy of their predecessors.

Non- alignment to National Government Policy Documents and Economic Blueprints: Tharaka Nithi County has learnt from challenges in the implementation of CIDP 2013-2017 (T/Nithi CIDP, 2018-2022, pp. 77 - 82); highlighting key issues as mostly governance and planning challenges, including lack of a 10 year County Spatial Plan which forms the basis for development of a CIDP , non-alignment of expenditure to CIDP plans (Non-CIDP PPIs), Lack of political good will to implement the CIDP programmes, projects and initiatives (PPIs)and highly inflated costs for PPIs. Another issue was non -alignment of CIDP to national strategies e.g. MTP II, Vision 2030.

Policy Incoherence and Conflicting mandates: Climate change policies, unlike many other sector specific policies are broad and multisectoral, and for them to attain the desired effect, there is need to review them for coherence. This requires sector coordination, for example between Ministry of Environment and Forestry (MEF), under which the Climate Change Directorate lies and other government MDAs, like the Ministry of Agriculture, Livestock and Fisheries (MoALF), Ministry of Lands and Physical Planning, Ministry of Energy, among others. Some of the ministries in development and review of their policies have identified areas of policy incoherence. For instance, the *Sessional Paper, No. 1 of 2017 on National Land Use Policy* has highlighted the following policies related to the Land Sector for review: Physical Planning Act Cap 286, the Land Act 2012, the National Land Commission Act 2012, the County Governments Act, 2012, the Land Registration Act 2012, Wildlife Conservation and Management Act, 2013, Kenya Maritime Authority Act Cap 370, the National Land Policy, the National Urban Development Policy,

Maritime policies and Environmental Conservation policies, (Ministry of Lands and Physical Planning, 2017). This study did not go into details of what reviews were required.

Weak public participation: The study '*Barriers and Facilitators of Citizen Participation in Governance Processes in Nairobi County, Kenya*' by Economic and Social Rights Centre (Hakijamii), 2017 sought to determine structural, policy, socio-cultural and administrative affecting public participation in governance; civil society capacity to participate in policy formulation; and to recommend strategic interventions for public participation in governance. It relied on various studies by governance institutions like International Budget Partnerships (IBP), Institute of Economic Affairs (IEA), Jesuit Hakimani Centre to identify factors affecting public participation in various counties between 2013 and 2017. According to the studies barriers to public participation in governance included late submission of documents for review to public, and in technical formats, and inadequate information; low literacy levels of participants; tokenism (Siala, 2015); citizen perceived waste of time by politicians due to non-adoption of citizen proposals (34% of respondents), (IBP Kenya, 2014, pp. 2 in Hakijamii, 2017); (Jesuit Hakimani Centre, 2013).

What has been viewed by civil society to work in public participation is offering policy suggestions and creating an enabling environment for communities to participate in policy formulation and decision-making. For example, Under Kenya Oil Exploration Project-(KEXPRO), implemented by Trócaire in Turkana, in collaboration with local partners and with DfID funding, this was achieved through training and facilitation of community members and Community based institutions and organizations to actively contribute towards policy decisions. Examples include contribution to the Petroleum (Exploration, Development & Production) Bill 2017 Bill, Turkana County Natural Resource Management Bill policy, trainings on Community Land Act (2016), Environment and Natural Resources. In addition, Forest Action Network (FAN) worked closely with the County government in the review of the Turkana County Natural Resources Management (NRM) bill and The Turkana County Environment policy. A key informant on barriers to public participation showed citizen apathy towards public participation. This is also due to lack of immediate perceived benefits by citizens engaging in policy and budgeting process.

"Public participation is at the centre of devolution process, involving project identification, design, implementation, monitoring and evaluation. This is geared towards improvement of efficiency and effectiveness, as well as equity in allocation of public resources, through

transparency and accountability; all processes driven by citizen oversight. However, the process is often impeded by lack of citizen willingness, capacity, knowledge and access to information on how to engage in the process. Invitation to participate in public forums are usually done on short notice, and large documents shared on the day of the forum for review, critique, input and feedback."

KII, Governance Expert

Long, tedious and costly policy process: Policy development/domestication and enactment process can be time consuming, taking more than 2-3 years, even with policy consultants and donor support some of the challenges identified by various actors at the county level are that most policies had remained in draft stages due to lack of public participation to meet the constitutional requirements, and that the cost of public participation was high. The challenge with lack of policy completion was that they fail to be operationalized as they are not included in the CIDPs and hence they fail to be budgeted for. communities' own short-sightedness and preference for short-term over long term benefits can be demotivating to policymakers to the community's own detriment, as they fail to envision benefits of policies (software) as compared to infrastructure (hardware) and allowances (tokenism).

"It's not about copying policies from national to county level. There is need to adopt them to the local governance structures. This can be time consuming. It took us 2-3 years to work on the climate adaptation plans only. The handout mentality and donor dependency prevent community members from public participation. More than half of them attended public participation sessions because they expected handouts."

KII, International Development Consultant

Low capacities and Inadequate Framework for public participation: is as a result of low literacy levels and/or ignorance, coupled with late release of documents for public participation, schedule and location of public forums, with last minute changes in plans in some counties, sub counties or wards, and top down approach due to time constraints**.** Regarding key processes like the budgeting cycle, most of the time, documentation for review is availed so close to the deadlines hence the review of the budgets does not allow County officials and the public sufficient time to review and provide feedback. Lengthy documents averaging 400 pages are availed at very short notice and this limits the feedback. This is coupled with the fact that the public usually does not have sufficient knowledge on the technical aspects of the subject matter hence renders the consultation ineffective.

CHAPTER FIVE:
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the findings from chapter 4 and draws conclusions based on the theoretical frameworks discussed in chapter 2. This study sought to analyze the status of county adoption of national level policies on climate governance through 3 main objectives: to analyze the extent of county adoption of CC policies; to evaluate existing governance structures in climate change governance; and to assess county capacities in climate policy domestication.

5.2. Discussions

5.2.1. Climate Policy Adoption/Domestication

It was established that target counties have low to medium domestication rates of policies, albeit having identified the need to domesticate the policies and to mainstream climate adaptation and to a less extent mitigation actions into development planning documents. This is evident in the increased budgetary allocations for environment and agriculture sectors, and with a number of policies at various stages of development, mostly with development partner and civil society support. However, policy processes do not stop at just ensuring that there are completed policies in place, but that they are influencing development spending. Considering that the policy domestication and implementation begun after 2013 following devolution in Kenya; after the 2010 promulgation of the new constitution (CoK- 2010); this study can infer that first priority has been given to domestication of policies that were considered most relevant to enable setting up of counties. The other 'orphaned policies' which were not considered very core to the basic operations of the counties largely fell through the cracks and were 'adopted' by development partners and civil society based on their political, socio and economic interests. There is a high preference for development of infrastructure, as compared to addressing software issues, which would largely be because of lack of infrastructure (transport, health, office etc) in the target counties seven years into devolution.

Policy domestication and diffusion is not merely adoption of a cluster of similar policies; in this case national level climate policies. Counties should not necessarily domesticate all national climate policies but can select the most relevant and redefine policy alternatives. This should be based on local issue definition, or lessons drawn from other governments. In that case, national

policies offer a starting point for the policy process but does not need to be a copy-and-paste of policies. Considerations should be made to first have an overarching policy that then gives guidance to lower-level sector policies, e.g., in agriculture, energy, transport and environment, for policy coherence and synergies. Consequently, in selection of policy alternatives, considerations for policy packages that deliver optimum outcomes should be prioritized. For example, soil and water conservation policies, natural resource management policies, water catchment and protection policies, and energy policies can be developed as a package and with regular consultation for coherence, and to ensure similar approaches, for example eco-system-based adaptation (EbA). Currently, sub-sector and sector policies have been developed without guidance of an overarching climate policy, which leads to policy incoherence.

With development partners pushing the agenda on policy development to ensure that there is a framework for government expenditure based on policy, counties are beginning to adopt policies, mostly with external technical and financial support. Where consultants are engaged to facilitate and lead in policy drafting, the process has been faster and more effective. However, identification and training of policy champions within the government is necessary for ownership, and to give technical guidance based on local context. Development partners also have their interests, based on their thematic focus areas and limited time for project implementation and delivery of results. This has in some instances led development partners and county governments to focus on 'low-lying-fruits' which are popular policies that are likely to face the least opposition and quickly go through to publication. Pressure to deliver development results can lead policymakers to abandon the more-technical and hard-sells, or policies that face stiff opposition and require a lot of public participation for consensus building as it is costly and time consuming.

Drawing from the political economy theory, indications are that governments can benefit through cooperation to address common problems, by establishing policy coalitions to push for a common agenda. Regional economic blocs can be targeted to adopt policies across the counties, for example on climate finance, natural resource management as they tend to have greater bargaining and negotiation power, and optimal outcomes. In reference to the systems theory, development partners and governments can work through consortium to strengthen capacities to develop bankable proposals and deliver them optimally. Further, they can develop joint proposals and implementation frameworks; as well as target capacity building and technology transfer collectively minimizing their costs and attracting more private sector investments due to large markets. This applies for counties' ability to adopt a set of CC policies to address issues effectively

and achieve optimal success, e.g., there were high success rates in policy adoption under the technical facility pilot project by Adaptation Consortium (ADA) for 'Mainstreaming climate into the public finance management system' through a Devolved Climate Finance (DCF) mechanism by NDMA in 2013 .

Shipan and Volden (2012) make reference to Peterson and Rom (1990) in regard to policy diffusion, stating that state policymakers worry about becoming "welfare magnets" to which potential recipients move in order to receive higher benefits. For development partners targeting climate governance, working strategically with regional economic blocs and across different ministries is beneficial for policy domestication, as there is a higher buy-in and policy coherence across sectors and regions. If regional economic blocs were to adopt policies to cushion their citizens against climate shocks, it would be optimal for them to offer packages across the counties to avoid being welfare magnets to other counties without similar benefits. This is especially true for shared resources that suffer the 'tragedy of commons' and more so pastoralist counties. Early adopters should then encourage laggards through influencing and negotiation with neighbouring counties to determine a set of policies to adopt and share the costs of engaging consultants to facilitate policy process.

For instance, in the case of Makueni's Health Policy, the county government's Universal Health Care Programme initiated in 2016, charges Ksh, 500 per year and provides Makueni Care Card. This gives attractive benefits for outpatient and inpatient services to members at all county hospitals annually; benefits not available in the neighbouring counties. As such, this becomes a welfare magnet for people from neighbouring counties due to inability to monitor members' county of origin. It would have been cheaper and more beneficial for surrounding counties to rollout a similar policy for optimal benefits, and to avoid overburdening Makueni County and diluting the policy benefits. This could provide a large market for the insurance company, but also lead to a win-win situation for counties and citizens.

To be able to dissect the success or challenges in policy adoption at the county level, scholars and policy makers need to pay attention to key challenges of policy diffusion, which relies heavily on issue definition and agenda setting, and political economy of the issue at hand. As such, county governments need to have their long-term climate governance strategy documents in place which should guide development partners to align to the county priorities, and work as a selling point for development resource mobilization and climate finance. Studies have shown that external factors

influence internal policy choices, be it adoption of governance reforms to enable access to development or climate finance; or adoption of austerity measures by governments facing debt crises. The Structural Adjustment Programmes (SAPs) largely adopted by African governments in the 1990s and early 2000 were externally driven by the International Monetary Fund (IMF) and the World Bank (WB). They were not necessarily deemed very successful in attaining the desired policy outcomes, but a compliance measure for countries to access development funding. Shipan, and Volden (2012) argue that policy diffusion is not always beneficial, and this can be seen through economic coercion, as in the case of Germany pushing for austerity measures in Greece (New York Times, 2016) or in the SAPs by IMF and WB.

5.2.2. Climate Governance Structures

Land governance, natural resource governance and climate governance work hand in hand in strengthening household and community resilience to CC and adaptive capacity to withstand and bounce back from climatic shocks. County spatial planning forms the basis for land governance and should inform CIDP development. This lacks in part or whole in all the target counties under this study, except for Makueni County which has made strides in spatial planning. Indications are that there are plans by other counties to develop their spatial plans. Turkana County has progressed in spatial plan development, but the sheer vastness of the county itself poses a logistical and resource challenge. As part of climate governance and the sustainable development agenda, spatial planning and land governance should be taken as a priority policy agenda to protect existing natural resources and to ensure sustainable development. This will ensure safeguarding of common resources like forests and water catchment areas, or seasonal grazing areas; providing coherence for all sectors involved as there will be a guiding land masterplan.

Anticipatory adaptation refers to development planning that factors expected climate changes and plans to safeguard future generations through zoning and settlement policies, and long-term capital investment (Dessler & Parson 2009 cited in p11 (Ongugo, Langat, Oeba, Kimondo, Owuor, Njuguna, Okwaro & Russell, 2014). This should be multi-sectoral, participatory and county specific, drawing on existing county spatial and climate data, and long-term climate projections. Land use changes are very core, especially with the rapid urbanization of areas after devolution in Kenya. Lessons should be learned from other counties, for instance, if a county shows a high variation in land use and land cover (LULC) as shown in Kiambu County, where there was an increase in built environment from 1.9% to 33.5% between 1984 to 2013, plans and strategies

must be developed to ensure that there is sustainable development and protection of natural resources. (Kiio & Odera, 2015).

The concept of open governance is new to most of the government staff, and this is seen in lack of information sharing, or bureaucracy in sharing 'government documents' to give the public and the other relevant stakeholders ample time to prepare and participate in governance processes at the county level. Deliberate actions should be taken to establish governance structures at the county level, to enable collecting and disseminating views on various policy processes and programmes from the grassroots up to the meso and macro level. It is not enough to have the structures in place, but also to sensitize the public to take interest in public participation, through civic education and technical support to utilize governance tools like development of memoranda, petitions or budget proposals. This is to ensure issues around CC adaptation or mitigation, and development of policy is based on their local priorities.

The KPMG Change Readiness Index (CRI) 2019 highlights low civil society capacity and citizen agency to influence climate policy due to low advocacy effectiveness, lack of negotiation and bargaining power. This can be addressed through strengthening governance structures at county level, through to sub-county, ward level and through the community structures. This will strengthen institutional capacity for preparedness, early warning and early action, and responsiveness to community needs. Cooperation and synergies and not competition will create civil society coalitions to speak with a collective voice and influence policy decisions, hold the government to account for transparency and to prevent rent-seeking behaviour in the face of climate finance. Community agency addresses the issue of "tragedy of commons", as communities take collective responsibility for access to, control of and benefits from shared natural resources to strengthen community adaptive capacity and resilience.

Increased land security is correlated in sustainable land management practices, while the reverse leads to unsustainable land practices due to the tragedy of commons principal where private users have an incentive to overexploit a shared resource as the costs are borne by others Todaro & Smith (2015). Lack of county level legislation, policy, operational frameworks to regulate implementation of the Community Land Act, and to facilitate communities to register claims for community land title contributes to the poor natural resource management, low investments in sustainable agricultural and land management practices. This results in increased land degradation, reduced agricultural productivity, increased food insecurity, adoption of negative

coping mechanisms, resource-based conflicts. It in turn leads to high government and development partner expenditure in relief and recovery, instead of development efforts. In Makueni county, in the period of 2013-17, the county government facilitated issuance of 23,978 title deeds, increasing titled land from 21% to 30% (Makueni, CIDP 2018-2022, pg19); which is a key factor in soil conservation and investment in land augmentation practices by households.

In Turkana and Marsabit Counties, being host to large infrastructural and flagship projects by the government, especially through public private partnerships, issues of displacement and compensation of communities, and pollution especially due to natural resource extraction like oil resources have arisen. While these are large counties, largely unoccupied, there exists traditional land use especially for the communities which are pastoralist. In relation to land use land cover changes (LULC), land governance issues and resource-based conflicts arise as the land is communal, with shared and extremely depleted natural resources like water and pasture. For Turkana and Marsabit, majority of the land is communal land, that is held in trust for community by the county government. This represents forested areas, grazing and ancestral lands, excluding public land. Constitution of Kenya chapter 5 on land and environment gives guidance on land use and responsibilities for environmental protection. Article 62 on public land overrides Article 63 on community land ownership, where the national government can change land ownership and use, in the case of minerals and oil for extraction. With political economy of land and resource extraction, without proper legislation at the county level, or public participation on governance of communal resources, private and economic interests will have an upper hand. In the absence of clear guidelines for community land legislation, issues of compensation and displacement of communities will continue to be a thorn in the flesh for development projects since conflicts will arise on land use.

Studies show that economic interests of states override sustainable development low-carbon pathways, and global climate governance targets (Stadelmann et al (2011). Constant friction exists between national and county government policy for oil and gas extraction and immediate community needs for sustainable water and pasture to support their livelihoods. This view supports Weible and Elgin's (2013) argument that governments should factor sustainability, while taking note of the contrasting market-based priorities, which often contrast environment programmes and policies. The immediate costs of displacement may be invisible to the government and all involved stakeholders due to moral hazard, information asymmetry or lack of

social and cost benefit analysis (SCA) and environmental impact assessment, to establish the current and future value of assets and liabilities given the different policy options taken.

5.2.3. Institutional Capacity

Generally, there are low capacities for the county governments for climate change policy domestication at the county level, given that the staffing capacities are low, and there is low technical knowledge on CC policies, climate finance, climate-proofing development, technology transfer as well as private sector engagements in CC adaptation and mitigation. As there are no climate change departments in most counties, the burden on climate change policy domestication or mainstreaming falls to the other relevant sectors, largely the agriculture, environment, water, and land sectors. As such, there is lean staff to execute these mandates, hence the need for technical backstopping through experts, policy drafting consultants and support for county legal teams to facilitate the development and passing of the policies and legislations. One of the priority actions under NCCAP II is to support alignment of county legislation to the CCA, 2016, and assist County Governments to develop County CC Fund regulations; with a target of 15 counties with climate change funds (CCFs) by 2023; only 5 counties Makueni, Wajir, Garissa, Isiolo and Kitui; have as at June 2020 (NCCAP, pp 73). A big challenge that remains however is that technical support especially by development partners is project based, and once a project comes to an end, the policies are left hanging.

A report by Ngari, Mathias & Mutavi, (2018) by GIZ attributes the improved quality of CIDPs with special focus on Agriculture to synergizing the efforts in policy domestication and county planning documents. This was coupled with concerted effort by the Joint Agriculture Sector Coordination and Consultation Mechanism (JASCOM) and other development partners to review CIDPs and offer training through Champions for Change (C4C), ensuring alignment to national, regional and international policy instruments (Ngari, Braun, & Mutavi, 2018). Development partners at the county level have been very key to the increased and improved development planning, more so climate change mainstreaming and policy domestication at the county level. The planning capacities of counties have been improved through implementation of the capacity development modules, for instance champions for change (C4C) and policy development training on policy development action plans conducted by GDC/GIZ and USAID/AHADI in collaboration with counties and Council of Governors (COG). Reference to existing policy toolkits has an added advantage in ensuring quality and optimal policy options are selected.

Technical support for county governments' strategic plan climate-proofing, fostering effective and participatory engagement in planning, implementation and monitoring between governments and citizenry, will strengthen climate resilience and have spill-over effects on other aspects national and county governments' development planning, (DDP, 2018), pp9. The first phase of climate governance support was implemented in 5 counties (Isiolo, Garissa, Kitui, Makueni and Wajir) under ADA Consortium; and 2nd phase is being rolled out to Vihiga, Nandi, Bomet, Kisii, Kakamega, Kisumu, Narok, Siaya, Taita Taveta, Tharaka Nithi, Embu, Machakos, Kilifi and Kwale) drawing on the pilot CCCF mechanism lessons learned (GIZ & UNDP, 2019), pp4. Accompaniment strengthens support and peer influence provides motivation to county leadership for policy development. It is therefore necessary to target counties in similar economic blocs for support to ensure resource optimization, through reduced administrative costs for technical support.

For the demand side, especially through bilateral or multilateral donors, the Paris Agenda on aid effectiveness seeks to establish forums for improved resource utilization of development funding. Counties have not optimized conditional grants available from development partners, with only 6% being conditional grants; either due to lack of knowledge of their availability, or lack of capacity to develop bankable proposals or negotiate funding. One of the key roles the civil society is influencing sector budgets and allocations through short-term and long-term sector planning. However, pushing for budgetary allocation alone in these sectors is not adequate, but also requires monitoring of absorption and utilization rates of development funding. Consequently, review of sector policies, development plans and budgets are core for monitoring compliance with SDGs, Vision 2030 and other regional and international frameworks supporting CCA and ensuring utilization of allocated budgets. Any policy advice should be evidence based, informed by sector experts, to give a critical analysis of the current situation to determine trends, and the need for modification of the current approaches in policy formulation, domestication, and sector budget allocation and utilization.

5.3. Limitation of the Study

The study focused on five counties (Embu, Tharaka Nithi, Marsabit and Turkana Counties), purposively selected based on their involvement in climate governance projects, and variation of arid and semi-arid (ASALs) regions. To provide insight for this study by county, the study has had to sacrifice depth, in terms of policy content to capture broad descriptions of policies adopted, budgets allocated, and enablers and barriers to the process

Initially, it was anticipated that 150 questionnaires would be filled to gather data on county capacity. However, during the inception period, initial data collection through the pilot study revealed that there were no county climate change units, and that climate change was mainstreamed in either environment or agriculture ministries. There were therefore no dedicated staff to climate governance for the counties, as this was either in formative stages or non-existent within the counties. The study relied heavily on review of the county documentation, websites and information from study respondents. A challenge however is that there is limited information on county websites, and access to available policies, whether in draft, or finalized in some instances relied on insider information from counties or development partner staff. COVID 19 travel restrictions also reduced the level of interactions with respondents.

5.4. Conclusions

This study concludes that political economy is salient to policy governance, and supports the findings by Sapiains, et al (2020) that asymmetric power relations and a lack of adequate mechanisms for community participation characterize climate governance in the Global South. The weak or non-existent governance institutions seven years into devolution, or their existence in an ad hoc manner, that is largely informal and not well coordinated perpetuates information asymmetry and lack of citizen agency. Governance issues around displacement, compensation and sharing benefits from such projects sitting on communal land have not been proactively through policy. The study also supports the notion by Tanner & Allouche (2011) that dominant factors as power in the negotiation phase; and resource, institutional capacity and governance in implementation phase are central to climate governance. Ability to identify the policy stakeholders, their interests and levels of influence, the enablers and blockers of policy proposals and establishing policy coalitions based on this is key.

The study agrees to some extent with Meadowcroft (2013) that “institutional inertia" hampers timely climate action, and that governments tend to delay action, and adopt less ambitious climate programs, due to avoidance of conflict from groups opposed to climate policies. However, with political goodwill and technical and financial support, evidence shows that governments are able and willing to adopt and implement policies. For instance, technical facility pilot project by ADA Consortium (ADA) through a Devolved Climate Finance (DCF), all the 5 target counties passed Climate Fund legislations that established County Climate Change Funds (CCCF) and allocated between 1-2% of their budgets to climate governance.

The study aligns to the systems theory, in that climate governance is a function of many moving parts which have to function as part of the whole in a complementary not competing manner. In order to achieve transformative climate governance, (Hölscher, 2020), institutional adaptive capacity should be strengthened through risk anticipation and mitigation to reduce mal-adaptation, and promote innovative alternatives, and ensure early warning and early for disaster risk reduction and climate resilience. Technological transfer for energy sector has largely been through public private partnerships, e.g. though Results Based Financing and Debt Facility (RBF) incentivizing private sector investments through foreign direct investments and partnerships including development partners. This study concludes that private sector is a key actor in technological transfer, and policies need to be supportive. Policy incoherence between taxation policy and promotion of a low carbon development pathway where taxation policy measures are perceived to be too punitive or restrictive is counterproductive for climate governance.

5.5. Recommendations

Deliberate actions should be taken to establish governance structures at the county level, to enable collecting and disseminating views on various policy processes and programmes from the grassroots up to the meso and micro level. Civic education and technical support for communities and civil society to create citizen agency and ensure that climate governance is based on local priorities. Direct institutional capacity support to counties can be done through the Council of Governors (CoG), special policy technical committees, MDAs expert committees for various thematic areas and development partners. For example, the Climate Change Directorate, and the Climate Change Units under the different MDAs can provide sector specific guidance on policy focus.

Alternative climate financing must me sought by counties and national government for adaptation measures, however climate finance systems must be put in place to ensure transparency and accountability. Currently, the access to global climate change facilities is perceived as tedious process that takes a long time for approvals. There is a narrative that GEF and other international donors have a preference for bilateral funding to multi-national agencies, and less for government funding; until such a time that they are assured that governance systems are efficient enough to channel funding. Capacity strengthening for development of bankable proposals and private investment negotiations should however be factored.

Tapping into toolkits, e.g. AHADI Toolkit, as an entry point for policy and governance training and Agri-Policy Tool Kit for agriculture sector policy advice. Such tools ensure evidence-based policy development, while offering strategic guidance on kind on interventions to be applied for policy development, mainstreaming climate governance and NRM, soil and water conservation into development planning ***(Appendix, 5).***

5.6. Areas for Further Research

This study left out other counties not involved in climate governance projects and considered to be more productive and have better climatic conditions. A similar study should be done for these counties, not targeted by governance projects and not limited to ASALs to get an insight of their climate governance structures, level of policy domestication and institutional capacities for climate governance. A deeper analysis is required of the distribution of county budgets between recurrent administrative expenditure and resources that go into development. Having a policy in place is not an end in itself, but a facilitation to resource allocation and addressing climate change issues in the most effective and efficient way for public good.

An evaluation of level of operationalization of policies needs to be done on a regular basis, and to be integrated in the national and county government monitoring and evaluation (M&E) frameworks based on clear milestones for each level of government. These should then be linked to performance contracts of the responsible office bearers to serve as an incentive. Further, a review of the content of climate policies to ensure adoption of transformative approaches for climate adaptation and mitigation should be conducted.

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APPENDICES

Appendix 1 : PARTICIPANT INFORMATION AND CONSENT FORM

STATUS OF COUNTY ADOPTION OF NATIONAL LEVEL POLICIES ON CLIMATE GOVERNANCE IN SELECT COUNTIES IN KENYA

SECTION 1: INFORMATION SHEET

My name is **Joy Mugambi**, from Strathmore Business School (SBS). I am conducting a study on the Status of *County Adoption of National Level Policies on Climate Change in Select Counties in Kenya*. The purpose of this study is to get your perceptions, opinions, views, comments, and suggestions regarding county climate change governance. There will be no right or wrong answers; only different perceptions and points of views, and I therefore encourage you to be very open as you voice out your ideas. Your responses to the questions I will pose will be kept strictly confidential. This should take about ten minutes.

SECTION 2: INFORMATION SHEET–THE STUDY

2.1. Eligibility and Benefits for taking part in this Study

This study is targeted at people who are directly engaging in climate governance or climate change work, through the county and national governments ministries, departments or agencies, as well as non-state actors and community resource people. You will not benefit personally from taking part in this survey. However, you may benefit from knowing that the information you share will be used to help address climate governance and environment issues in this community.

2.2. Risks or Dangers of taking part in this Study

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

2.3. Options for Participating in this Study

Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to complete a questionnaire or participate in an oral interview to get information. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time to seek further clarifications. You are free to decline to take part in the study from this study at any time without giving any reasons.

2.4. Who will have access to my information during this research?

All research records will be stored in securely, and information that may be transcribed into our database will be sufficiently encrypted and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

2.5. Who can I contact in case I have further questions?

If you are satisfied that you fully understand the goals behind this study, you will be asked to sign the informed consent form (this form) and then be taken through a questionnaire to complete. There are no any risks or dangers in taking part in this study. If you have further questions, you can contact me, **Joy Mugambi**, at SBS, or by e-mail, joy.mugambi@gmail.com, or by phone 0721 275 352. You can also contact my supervisor, Dr. David Chiawo on 0726 254 971, or by e-mail, dchiawo@strathmore.edu . If you want to ask someone independent anything about this research please contact: The Secretary–Strathmore University Institutional Ethics Review Board, P.O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu, Tel number: +254 703 034 375

2.6. Participation in the research study

I have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage. Please tick the boxes that apply to you;

☐ I AGREE to have my completed questionnaire stored for future data analysis

☐ I DON'T AGREE to have my completed questionnaire stored for future data analysis

Participant's

Participant's Name: _____ **Signature**: _____

Date: _____/_____/_____ dd / mm / year

I, _____ **(Name of person taking consent)** certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Appendix 2: Research Guide- KII: Mechanisms, Enablers and Barriers to Climate Action

(Local opinion Leaders/ Government workers/ Non State Actors)

Introduction

Existing Climate Governance Mechanisms

1. What mechanisms has this county put in place to address climate change? *(probe)*
    a. Policy formulation and implementation
    b. Multi-sectoral planning/ coordination and coherence between the sectors/ Ministries departments and agencies (MDAs)
    c. Collaboration with non-state actors to tap into the existing capacities
    d. Investment in Climate change data and information dissemination.
    e. Building capacity to understand climate change and climate finance and planning
    f. Access to climate finance/ Develop proposals for CC action e.g. sustainable development and disaster risk reduction, and submit proposals to climate and non-climate related funders;

Enablers for Climate Action

2. What have been your greatest enablers as a county towards climate change adaptation, mitigation and climate financing?
3. What form of technical support have you received to facilitate adoption of national level CC policies at the county level from
    a. National government
    b. Bi-lateral arrangements (other governments)
    c. Non State actors
    d. Private sector

Barriers to Climate Action

4. What have been the major barriers faced in this county in an effort to combat climate change? (probe for)
    a. Collaboration and coherence between MDAs
    b. Climate Finance
    c. Human resource capacity
    d. Technical knowledge and skills
    e. Public participation in climate governance and planning
    f. Private sector engagement

Proposed Solutions to challenges

5. What actions should be taken to improve adoption of national level policies at county level, and by whom? (probe for)
    a. Collaboration and coherence between Ministries Departments and Agencies (MDAs)
    b. Collaboration with Non state actors and private sector
    c. Climate finance
    d. Human resource capacity
    e. Technical knowledge and skills
    f. Public participation in climate governance and planning

Thank you for participating in the discussion. *(Ask if the participants have a question for you)*

End

Appendix 3: Checklist for Qualitative Document Review

County Name: _____ Date of Review: _____

1. Which of the following governance structures exist within this county to support development of climate change policies or to engage in climate governance?

Governance Structures / *Existing*	**Yes**	**No**	**Remarks**
h) Climate Change focal person			
i) Government sector working groups/ Technical working groups (TWGs)			
j) Local governance structures- (macro) County Level			
k) Local governance structures- (meso) Sub County level			
l) Local governance structures- Ward level			
m) Community governance structures- (micro) e.g. community groups			
n) Civil society structures e.g. Civil society reference groups/			

2. What are the existing institutional arrangements that support CC governance in this county?

Institutional structures in place	**Existing?**		
	Yes	**No**	**Remarks**
a) Climate Change Fund			
b) County Climate Change Steering Committee			
c) County Climate Change Oversight Board			
d) Climate Change Planning Committees (CCPCs)			
e) Climate Change Information Services			
f) Ward climate change planning committees (WCCPCs).			
g) County Monitoring & Evaluation systems			
h) County CC Budget tracking systems			
i) Others *(Specify)*			

3. What is the **level of integration of climate change** into parts of the government planning documents/ budgeted strategies? *(Rating scale of 1 to 5, where 1 is the least, and 5 is the highest)*

Government planning documents/ budgeted strategies	**Perceived level of integration of climate change**					
	1 Low	**2**	**3 Medium**	**4**	**5 High**	**Evidence / Pg No.**
a) County Integrated Development Plan (CIDP)						
b) County Annual Development Plan (CADP)						
c) County Budget Review and Outlook Paper (CBROP)						
d) The County Fiscal Strategy Paper (CFSP)						
e) Estimates of Revenue and Expenditure (ERE)						
f) Annual Contingency Development Plan/ Disaster Contingency Plan						

Adopted Policies and Integration in County Planning Documents

4. What policies have been **adopted, or formulated** at county level that are aligned to climate change adaptation and mitigation? *(Tick where appropriate, and list specific County Level Policies)*

National Level Policy *(read out the policies, and tick as appropriate)*	**6.a. Status of adoption**		**6.b. County Level policies on Climate change**
	Adopted	Not Adopted	List of **Specific County Level Policy** (Name and Year) – *be specific if they are bills or policies*
a) National Climate Change Act 2016			
b) Sessional Paper No. 3 of 2016 on National Climate Change Policy Framework			
c) National Environment Policy - 2013			
d) National Climate Change Adaptation Strategy 2013-2030			
e) National Climate Change Adaptation Plan (NCCAP- 2013-2017; 2018-2022)			
f) National Climate Change Response Strategy (NCCRS)- 2010			
g) Others, specify			

5. What is the level of integration of the core drivers of GHG emission reduction and climate governance into parts of the government planning documents/ budgeted strategies for this county? *(Rating scale of 1 to 5, where 1 is the least, and 5 is the highest)*

Thematic Focus	**Perceived level of integration in County government documents / Budgeted strategies**					
	1 Low	**2**	**3 Medium**	**4**	**5 High**	**Remarks**
a) Climate Policy (alignment to and engaging in international, national, sub national policy processes)/ effective policy						
b) Renewable Energy (to 100% renewable energy by 2050)						
c) GHG emission targets						
d) Efficient Energy use (net- zero emissions)/ reduced energy consumption						
e) Sustainable consumption and Production targets (SCP) e.g. postharvest management						
f) Climate change adaptation targets e.g. ecosystem based adaption, Disaster Risk Reduction (DRR), ending drought emergencies (EDE)						
g) Climate Change Mitigation targets e.g. reforestation, forest cover targets,						
h) Nationally Determined Contributions (NDCs) – targets set for the subnational level (county)						

6. Has this county government allocated any financial resources for CC interventions in any of the following budgeted strategies? If yes, how much?

Documents (County Budgeted Strategies)	**2a.Allocated?**		**2b. Amount Allocated**
	Yes	**No**	**Ksh.** *(indicate amount, or not sure) refer to documents if available*
a) County Integrated Development Plan (CIDP)	1	2	
b) Annual Development Plans (ADP)	1	2	
c) County Fiscal Strategy Papers (CFSP)	1	2	
d) County Budget Review and Outlook Papers (CBROP)	1	2	
e) Budget Estimates (Proposed Budgets)	1	2	
f) Approved Estimates (Enacted Budgets)	1	2	

7. Document review to establish the level of:

   a) climate change policy adoption

   b) public participation in policy formulation process c) capacity – technical, technological, Human resource, adaptive capacity and climate resilience?

Document Types
a) Public Participation
b) County Government Management & Planning
c) County Government Budgeting Processes
d) Social Accountability
e) Access to Information
f) Climate change policies- National
g) Climate change policies- International
h) Climate governance processes/ events
i) Climate change adaptation and mitigation
j) Climate Finance
k) Monitoring and Evaluation
l) Other *(Specify)*

Appendix 4: Specific County Policy Documents

	Key Focus Areas	Support Received	Remarks	Source
Embu				
Draft Embu County Climate Change Policy	✓ This has not been shared online as it's in draft stages.	Technical support by Trócaire through PACJA (Pan African Climate Justice Alliance). *Taken more than 2 years*	✓ The Policy seeks to provide a framework to guidance for costed climate change interventions through regular and periodic Climate Change Action Plans to be integrated in CIDPs.	Embu County Website: http://www.embu.go.ke/embu-county-drafts-county-climate-change-policy/ accessed on 7th March 2020
The-Embu-County-Environment-Management-Act-2015	✓ environmental protection ✓ waste management, ✓ air and noise pollution.			http://www.embu.go.ke/downloads/ Embu CIDP, pp 75-76
Embu County Water Bill, 2015	Key adaptation actions- ✓ Water catchment protection ✓ Water management; sewerage systems and control trade effluents. ✓ water and sanitation ✓ soil and water conservation		✓	
Sector policies : ✓ Embu Natural Resource Management Policy and Bill ✓ Sand harvesting policy and Act (Embu CIDP, 2019, pp 88).	✓	The policies still at the draft stages with technical support from Trócaire.	There are plans to develop a county Sand harvesting policy and Act (Embu CIDP, 2019, pp 88).	

	Key Focus Areas	Support Received	Remarks	Source
Marsabit				
Marsabit County Climate Change Adaptation Action Plan -(2018-2022**)**	✓ Agriculture and food security, ✓ livestock and pastoralism, fisheries, ✓ rangelands wildlife and tourist, ✓ water and sanitation, ✓ forestry and land use, ✓ improved energy conservation, ✓ communication and social infrastructure ✓ climate finance- resource mobilization plan	Technical support by GIZ and Ambero- who hired a short term consultant to lead the process. *Took 2 to 3 years*	Key adaptation actions- ✓ Environmental rehabilitation and sustainable rangeland management ✓ Water harvesting techniques and water catchment protection ✓ Soil and water conservation ✓ Energy efficient technology Drought tolerant and pest resistant crop varieties	Marsabit County CCAAP Pg, 26-32 https://ambero.de/en/ambero-assists-marsabit-county-government-to-forge-their-climate-adaptation-action-plan/
Climate change policy and bill	✓ Not available for review		These are planned for development in the 3rd year of implementation under CIDP II; (Marsabit County CIDP, 2018-2022, pp. 111), Reports indicate that the draft climate change policy is in place as at August 2020	NTV Kenya : Marsabit County Assembly urged to fast track launch of Climate Change and Adopt policy into bill, August 2020 https://www.youtube.com/watch?v=G1uhwIE6IKc
Marsabit County CC Mainstreaming Guidelines – (3 documents)- for Water, DRR and Agriculture	Guidelines for: ✓ Water and Sanitation Sector ✓ Disaster Risk Reduction (DRR) Sector ✓ Agriculture, Livestock and Fisheries Sector -	Supported by DFID StARCK+ Extension Programme- implemented by Green Africa Foundation .	✓ These facilitated CC mainstreaming in CIDPs 2018-2022 through a programmatic approach ✓ It was a joint partnership between Green Africa Foundation and regional county governments of Garissa, Marsabit and Wajir and civil society	http://www.greenafricafoundation.org/publications/ DRR Sector Water and Sanitation Sector Agriculture, Livestock and Fisheries Sector

	Key Focus Areas	Support Received	Remarks	Source
Agric sector bills and plans: ✓ County Agriculture Sector Plan ✓ Rangeland Policy; Rangeland Bill; ✓ Livestock Policy; Livestock and Marketing Bill.	Identified areas of focus by ministry of water, environment and natural resources: ✓ monitoring, mitigation and adaptation to Climate Change ✓ Water resources development and management, ✓ Sustainable Land Management, and environment conservation ✓ Carbon markets through carbon trading.	Some of the policies were project supported (GIZ), and might not have progressed much since the project is ending.		https://marsabit.go.ke/departments/water-environment-natural-resources/
Makueni				
-Makueni County Climate Change Regulations 2015				https://makueni.go.ke/acts-and-policies/climate-change-fund-regulations-2015/
-Makueni County Climate Change Fund Inventory- 2013-2017		Financial support (DfID) through ADA Consortium and its members - Christian Aid and Anglican Development Services – Eastern (ADS-E) - who provided technical support in the implementation of the County Climate Change Fund Mechanism in Makueni County.		https://makueni.go.ke/water-sanitation-environment-and-climate-change/
Makueni County Spatial Plan 2019-2029	These documents seek to domesticate and operationalize the national Kenya Vision 2030,	MCSP was developed with technical and financial support from UNDP	The County Spatial Plan aligns to Kenya Vision 2030 and the Makueni	https://makueni.go.ke/download/makueni-

	Key Focus Areas	Support Received	Remarks	Source
Makueni Spatial Vision 2030	the National Land Policy, the National Spatial Plan and the Makueni Vision 2025 ✓ Sustainable conservation and natural resource exploitation ✓ Sustainable and climate smart agriculture ✓ Sustainable development planning ✓ Disaster response facilities and infrastructure ✓ Road infrastructure planning ✓ Land use management strategy – including urban and rural planning, including agriculture land preservation	through the Council of Governors (CoG), through an inter-departmental team and in consultation with key stakeholders	Vision 2025and aspires *"to make every acre count"* .	county-spatial-plan-2019-2029/ (Makueni, CSP, 2019), pp110.
Makueni County Climate Information Services Plan (MCCISP)	-aims to develop and deliver weather and climate information which can support local, sub-county and county-level decision making	ADA consortium	Focus on county, sub-county, ward and village levels, County Ministry Departments across sectors together with their respective extension services, decentralized national Government agencies and other CSOs.	https://www.adaconsortium.org/index.php/component/k2/item/387-makueni-county-climate-information-services-plan
✓ Makueni Water Act 2020 & Water Policy ✓ Makueni County Water Bill 2019 ✓ Makueni County Sand Conservation and Utilization Act 2015 Makueni County	These are sector policies that contribute to climate governance and adaptation measures.			https://makueni.go.ke/acts-and-policies/

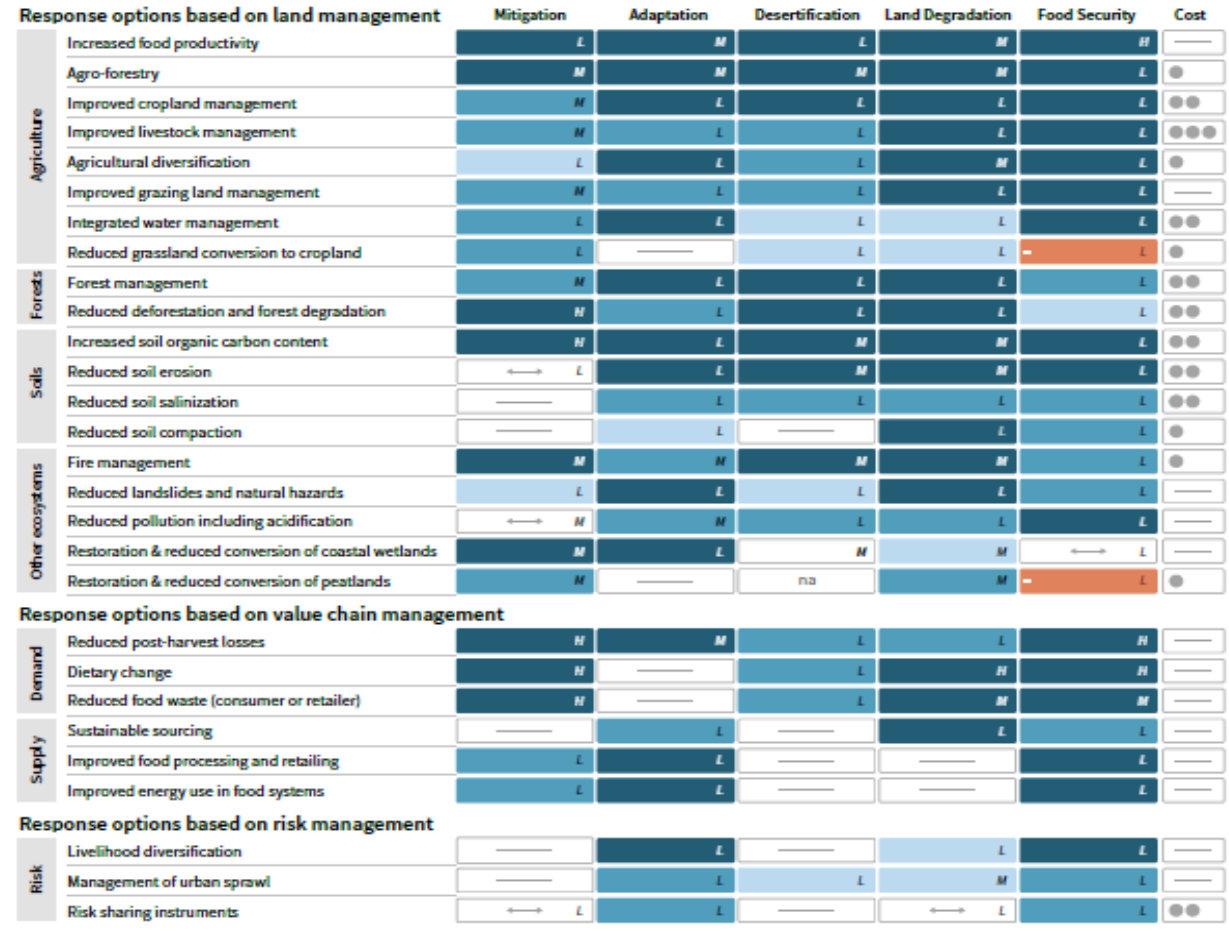
	Key Focus Areas	Support Received	Remarks	Source
Sand Conservation and Utilization Act 2015				
✓ Makueni County Emergency Fund Act 2015 ✓ Makueni Social Protection Policy	Catering for shocks e.g. environmental shocks that lead to loss of property -Social protection in case of a shock- including rights to health, education, food, and decent livelihoods.		Social Protection and inclusion to all persons in Makueni County. Article 43 of the Constitution guarantees all Kenyans economic, social, and cultural (ESC) rights.	https://makueni.go.ke/acts-and-policies/emergency-fund-act-2015/ https://makueni.go.ke/acts-and-policies/policy-review/social-protection-policy/
T/Nithi				
Environment sub sector bills ✓ Sand harvesting draft bill – 2015; Natural resources management draft bill – 2017; ✓ Charcoal draft bill – 2017, and Water resources management draft bill – 2017 ✓ Environmental Management and Coordination Act (EMCA) bill	Environmental protection and natural resource management.	All supported by Trócaire, PACJA & Caritas Meru-T/Nithi Deanery.	These are sub- sector bills contributing to environment protection and natural resource management.	They are not available publicly for review
The Mining Bills			At cabinet level waiting for debate at the county assembly County Address 2020 (pp23).	
T/Nithi Disaster Management Bill 2019			Has been tabled at the Cabinet Level; and according to the Governor's state of the County Address 2020 (pp23)	

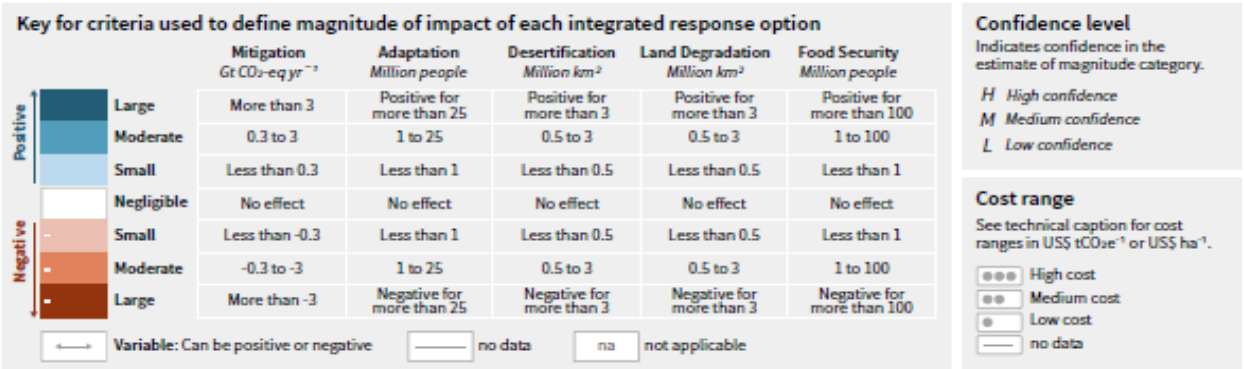
	Key Focus Areas	Support Received	Remarks	Source
Turkana				
The Turkana County Water Act, 2019	It provides regulation and management of water and sewerage services in Turkana County, to support the implementation of National Government Policies on water conservation in the county. It also stipulates the water user rights by order of priority, to govern the utilization of the limited resource in the county.		The Act establishes Turkana County Water Department, whose mandate is to among others, develop policy, regulations and standards for water management; and to undertake and regulate development of waterworks ; as well as to provide technical guidance in county planning documents, around water resource use e.g. in CIDP and spatial plans.	https://turkana.go.ke/wp-content/uploads/2019/10/The-Turkana-County-Water-Act-2019.pdf
Turkana Climate Change policy, Sept 2020	The policy promotes adopting a low carbon development pathway by: ✓ Managing drylands for carbon sequestration; ✓ Improve urban planning and waste management; ✓ Improving transport to increase efficiency; ✓ Developing clean energy technologies to reduce the use of fossil fuel; ✓ Greening the extractive industry in Turkana County.	Turkana County Climate Change Policy, (Sept, 2020)- *Support from Trócaire and Caritas Lodwar- under DFID (DDP)*	CCA and mitigation programmes are prioritized under the department of Public Service, Decentralised Services and Disaster Management, Pastoral Economy and Fisheries, Energy, Environment and Natural Resources; Water Services, Irrigation and Agriculture. CIDP 2018-2022 has identified ambitious flagship project over the next five years to contribute to climate change adaption programmes.	https://www.turkana.go.ke/wp-content/uploads/2020/09/Book.pdf Turkana County CC Policy, pp10
Policy Framework For Extractive Industries In Turkana-County, Sept 2018	The 2018, Turkana County Strategy and Fiscal Paper highlight a focus on Oil and Gas governance, targeting the ✓ County Policy and legislation on Petroleum			https://turkana.go.ke/wp-content/uploads/2018/09/Policy-Framework-For-Extractive-

	Key Focus Areas	Support Received	Remarks	Source
	Revenue Sharing and Local Content ✓ Capacity building of county staff on and community sensitization on oil and gas issues			Industries-In-Turkana-County.pdf Turkana County CSFP (2018/19, pp 30-31)
Turkana County Monitoring and Evaluation Bill, 2019	This is a framework for coordination, collaboration and alignment of M&E in the implementation of policies, programmes and projects; setting up an institutional and funding It establishes the: ✓ County Monitoring and Evaluation Advisory Committee; ✓ County M&E Committee; ✓ County M&E Directorate		The Bill establishes County Integrated M&E system (CIMES) as well as sub-county, ward and village M&E committees to improve governance, through greater transparency in information sharing for better decision making; through evaluations and performance contracting and appraisal systems.	https://turkana.go.ke/wp-content/uploads/2019/10/Turkana-County-M-E-Bill-2019-Revised-2.doc.pdf
Sub sector Draft Bills: ✓ County NRM Bill, 2018 ✓ Turkana County NRM Policy, 2018; ✓ Turkana County Environment Policy, 2018 ✓ Turkana County Environment Bill, 2018.		Supported by Forest Action Network (FAN) under Trócaire/ IrishAid funding	The status of bills currently unknown as they have not been shared publicly.	

Appendix 5: Policy Options for Climate Adaptation for Agriculture Sector

This annex serves as a reference by policy makers intending to influence agriculture sector policy to make is more transformative for climate adaptation and mitigation according to the UNFCC guidance to address GHG fluxes in land-based ecosystems , land use and sustainable land management in relation to climate change adaptation and mitigation, desertification, land degradation and food security (UNFCC, 2019).

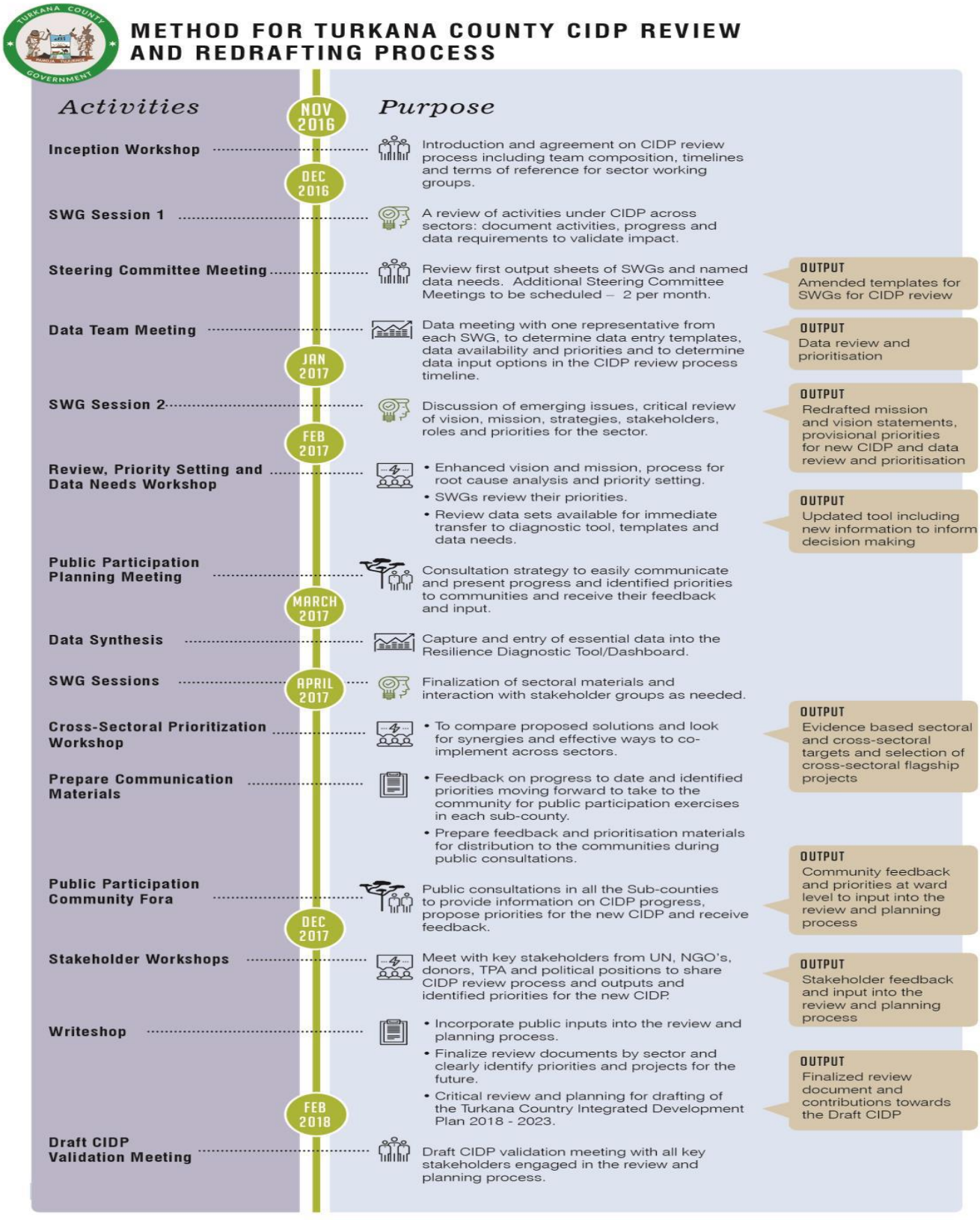




Source: UNFCC, 2019: Climate Change and Land

Appendix 6: Route Cause Analysis

Figure 2 Turkana CIDP 2018-2022 Review Process -Route Cause Analysis



Source: Turkana CIDP 2018-2022, Popular Version, pp89

Appendix 7: Ethical Clearance

Strathmore UNIVERSITY

17th September 2019

Ms Mugambi, Joy Kawira
joy.mugambi@gmail.com

Dear Ms Mugambi,

RE: Status of County Adoption of National Level Policies on Climate Governance in Select Counties in Kenya

This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is **SU-IERC0532/19.** The approval period is **17th September, 2019 to 16th September, 2020.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

for: Prof Florence Oloo
Secretary; SU-IERC

Cc: Prof Fred Were
Chairperson; SU-IERC

STRATHMORE UNIVERSITY INSTITUTIONAL ETHICS REVIEW COMMITTEE (SU-IERC)
17 SEP 2019
TEL: +254 (0)703 034 000
P. O. Box 59857 - 00200
NAIROBI - KENYA

Appendix 8: NACOSTI Research License

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 759281

Date of Issue: 19/March/2020

RESEARCH LICENSE

This is to Certify that Mr.. Jay Kawira Mogambi of Strathmore University, has been licenced to conduct research in Embu, Makueni, Marsabit, Tharaka-Nithi, Turkana on the topic: STATUS OF COUNTY ADOPTION OF NATIONAL LEVEL POLICIES ON CLIMATE GOVERNANCE IN SELECT COUNTIES IN KENYA for the period ending : 19/March/2021.

License No: NACOSTI/P/20/4034

759281

Applicant Identification Number

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NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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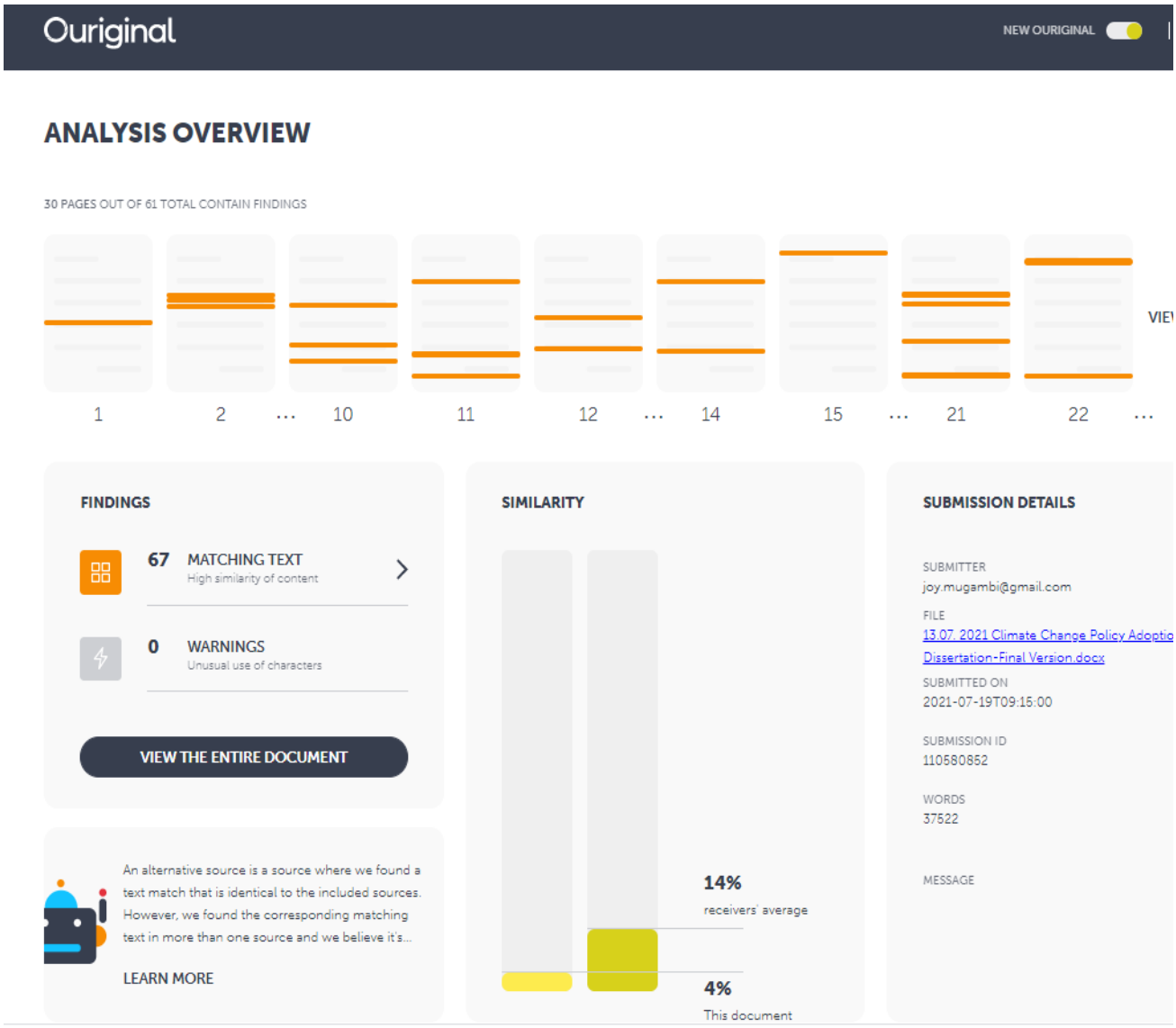
Appendix 9: Similarity Report- Ouriginal



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Submitter email	joy.mugambi@gmail.com
Similarity	4%
Analysis address	library.strath@analysis.urkund.com

Appendix 10 Certification of Final Version of Thesis form

Strathmore University

School of Graduate Studies

CERTIFICATE OF FINAL VERSION OF THESIS/DISSERTATION

Name of Candidate Joy Kawira Mugambi	Student Number MPPM/96417/16
Faculty/School/Institute Strathmore Business School/ Institute of Policy and Governance	Title of Degree: Master's in Public Policy and Management (MPPM)
Title of Thesis: "Status of County Adoption of National Level Policies on Climate Governance in Select Counties in Kenya"	
Postal Address	Email: joy.mugambi@gmail.com/ joy.mugambi@strathmore.edu
Expected date of Graduation: 3rd December, 2021	
Number of Permanently bound copies submitted: 2 *Electronic Thesis submitted*: ☒ Yes ☐No	

Please ensure that you show punctuation and italics exactly to ensure that your title appears correctly on your academic transcript. The title recorded here should be EXACTLY as appears on the cover page of your thesis.

Candidate's signature:	Date: 11th November 2021

DECLARATION		
We, the undersigned, agree and certify that this is the final version of the thesis and no further alterations will be made.		
Candidate Joy Kawira Mugambi	Signature	Date 11th November, 2021
Principal Supervisor	Signature	Date
Co- Supervisor	Signature	Date
Dean, School of Graduate Studies	Signature	Date