

UNIVERSITY OF KWAZULU-NATAL

**MAINSTREAMING CLIMATE CHANGE ADAPTATION PRACTICE INTO
INTEGRATED DEVELOPMENT PLANS IN SOUTH AFRICA: A CASE OF CITY OF
CAPE TOWN, WESTCOAST DISTRICT AND SWARTLAND MUNICIPALITIES**

by

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DECLARATION

I, **Samuel Ndumba CHADEMANA**, declare that:

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DEDICATION

I want to dedicate this thesis to my mother, Lizzie Mutinta Ndumba, who had the initiative to whip me to school at some occasion when I did not want to attend.... looking back now, I thank you for not tolerating my mischief.

ACKNOWLEDGEMENTS

I would like to acknowledge the contributions of members of staff from West Coast District Municipality, Swartland Municipality and City of Cape Town (in particular Helen Davies, formerly with the City of Cape Town now with Provincial Government, Leon Fourie with Swartland Municipality and Wilhelm Markus with the West Coast District Municipality) Thank you for graciously taking time off your busy schedules to share your Knowledge and experience with me in. I appreciate your linking me up to other relevant individuals and organizations outside of your immediate institutions who I would have not counted important without your guidance and who added so much value to my study. Mikatheko Sithole, for your valuable contribution that helped me tie up remaining loose ends in my findings-your insights were invaluable. To Niven Reddy, I say thank you for the Study Area Map, your computer Skills continue to amaze me. Professor TI Nzimakwe for your enduring patience and mentorship at each blooper and stumble-I would not have done it had you not given me a second chance.

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ABSTRACT

“Mainstreaming Climate Change Adaptation into Integrated Development Plans” attempts to highlight the grounds for the current policy-implementation gap in as far as the mainstreaming of Climate Change adaptation practice into Integrated Development Plans is concerned. This study endeavours to determine the inherent cause(s) of this lag within the institutional systems and structures of municipalities as well as other causes that lie in the sphere of intergovernmental relations. A qualitative multiple-case study approach was utilized for this study, to enable an in-depth analysis of the municipalities as complex systems, as it provides tools for researchers to study complex phenomena within their contexts. A multiple or collective case study approach allowed the researcher to analyse within each setting i.e. municipal type and across the municipalities. It allowed the researcher to examine the three different types of municipalities and gain a better understanding of their differences and similarities in as far as Climate mainstreaming is concerned. The results indicate that currently there is a general lag between the provisions of the current national Climate Change policy on mainstreaming climate Change adaptation into development plans and the actual progress on the ground. The study results indicate that despite South Africa’s legislative and policy regime compelling municipalities to act in reducing disaster risks, planning for climate change remains nothing more than sophisticated rhetoric in most municipalities. A clear case of institutional Decoupling; in particular policy–practice decoupling; which occurs when rules or in this case policy imperatives are unimplemented or routinely violated. In all fairness however, the reasons behind institutional decoupling-the decision or omission not to mainstream climate change practice into IDPs as a national government directive and hence allocate resources and implement adaptation interventions is not steeped in malevolence it is however, a case of political expedience. Resources are instead prioritized to service delivery issues that politicians deem as more important than responding to climate. Therefore, considering the centrality of municipalities in the South African sustainable

development agenda and the gravity of the Climate Change problem one would expect more resolve in as far as the implementation of Climate Change policies and strategies is concerned. This should include, empowering municipalities both technically and fiscally; need for more political will, more intersectoral and/or intergovernmental cooperation and urgent legislative reforms.

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LIST OF ACRONYMS

ADB-African Development Bank

ASGISA-Accelerated and Shared Growth Initiative for South Africa

CAPAs-Climate Adaptation Plans of Action

CDKN: Climate and Development Knowledge Network

COCT-City of Cape Town

CoGTA-Cooperative Governance and Traditional Affairs

COP-Conference of the parties of the UNFCCC

DEA: National Departmental of Environmental Affairs of South Africa

DEAT:Department Environmental Affairs and Tourism now DEA

DPLG: Department of Provincial and Local Government

ERM-Environmental Resources Management

GCM-Global Circulation Models

GDP-Gross Domestic Product

GHG-Green House Gas

GTZ-German Technical Cooperation Agency

GVA-Gross Value Added

IDP-Integrated Development Plan

INDC-Intended Nationally Determined Contributions

IOM-International organization for Migration

IPCC: Inter-Governmental Panel on Climate Change

ISRDP-Integrated Sustainable Rural Development Programme

LDCs-Least Developed Countries

LED: Local Economic Development

LGCCSP-Local Government Climate Change Support Program

LTAS-Long-Term Adaptation Scenarios Flagship Research Programme

LTMS-The Long-Term Mitigation Scenario

MDGs-Millennium Development Goals

MFMA-Municipal Finance Management Act

MTEF-Medium Term Expenditure Framework

NAPA-National Adaptation Plan of Action

NAS-National Adaptation Strategy

NCCRP- National Climate Change Response White Paper

NDP-National Development Plan

NPC: National Planning Commission

OECD-Organization for Economic Cooperation and Development

PFMA-Public Finance Management Act

SDBIP-Service Delivery and Budget Implementation Plans

SDGs-Sustainable Development Goals

SIDS-Small Island Development States

SNC- Second National Communication Report to the UNFCCC

UN-United Nations

UNDP-United Nations Development Programme

UNEP-United Nations Environmental Programme

UNFCCC-United Nations Framework Convention on Climate Change

UNpei-United Nations' Poverty-Environment facility

URP-Urban Renewal Programme

WCDM-West Coast District Municipality

WCG-Western Cape Government

CHAPTER ONE

INTRODUCTION AND OVERVIEW OF THE STUDY

1.0 INTRODUCTION

The 1996 adoption of the current constitution provided the underpinning for South Africa's decentralised three tier government system with each sphere, namely national, provincial and local, being ideally autonomous politically, administratively and financially (Schoeman, 2006). What this autonomy really meant is that municipalities had now been handed self-determination in areas of policy and fiscal management; and positioned them at the epicentre of sustainable development planning and management in South Africa.

Consequently, the demands placed on local government in South Africa, since then, have increased exponentially both in diversity and magnitude thus imposing tremendous pressure on most of the already ill-capacitated municipalities. These diverse challenges have underscored the need to plan in an integrated and sustainable way (Urquhart and Atkinson, 2002), taking into considerations the social, economic and environmental variables at all times in order to optimize the allocation and utilization of scant resources and accelerate service delivery (DPLG, 2006). Since then however, the road has not been smooth sailing; municipalities have performed dismally in most cases. Moreover, in as far as integrated planning is concerned, they have been overwhelmed by the magnitude of the socio-economic development needs of the South African communities and have neglected other development imperatives such as Climate Change (Harrison, Todes, and Watson, 2008; Faling, Templehoff, and Van Niekerk, 2012).

The multiplicity and magnitude of these challenges exacerbated by scarce resources and lack of capacity have led most municipalities to prioritize socio-economic needs

over environmental imperatives (Ziervogel and Taylor, 2008). Among the neglected responsibilities is the integration of mitigation and adaptation considerations into IDPs, as demonstrated by the reality that by 2012 only two municipalities countrywide had fully mainstreamed both Mitigation and Adaptation considerations into their IDPs (CDKN, 2012). This is despite both the National Development Plan and the National Climate Change White Paper clearly endorsing climate change adaptation planning as mandatory for all spheres of government (Boyd, 2012; DEA, 2011; NPC, 2012). Municipalities are, therefore, now required to make sure that climate change concerns are equally prioritised and mainstreamed into planning processes, legislation and Policies across all departments and in all plans, policies and programmes (DEA, 2011). This top-down institutional change is however facing many challenges at the municipal levels and hence not happening as prescribed and definitely not at the pace expected by policy makers. This lag in integration has generally been attributed to resource constraints, the lack of institutional capacity and clarity on roles and responsibilities; poor planning and implementation resulting in massive backlogs in climate change mainstreaming (Faling et al 2012).

With reference to the above, could this be sufficient evidence for a case of failure to implement policies by the relevant spheres of government? According to Brauns and Wallis (2014), in relation to policy formulation, South Africa can boast of some of the best policies in the world but government struggles with their implementation. Lyman (2006) also alludes to the fact that there is clearly a problem of failure to translate well intended policies into practice in South Africa across most government departments.

1.1 PROBLEM STATEMENT

in this Century, Global warming is an environmental reality that poses the greatest threat to the attainment of the global sustainable development goals (Agrawala et al, 2008). The projected impact of climate change on the global and national economy if

nothing is done to avert global warming by 2050 is well documented (Stern, 2008; IPCC, 2007; Agrawala et al, 2008; Zierwogel et al, 2008, DEAT, 2004; Anbumozhi, 2009) and is nothing short of catastrophic on human livelihoods.

In essence, the changes in the earth's climate is more of a local phenomenon than a global or national one, since most of the impacts are most felt at the locally. (Meashan et al, 2011) and hence the need to dovetail all efforts aimed at combating the changing of climate at the municipal level. Municipalities have a predominantly vital role to play in developing contextually relevant policies and strategies that take advantage of local opportunities and tackles Climate related vulnerabilities (CDKN, 2012). While South Africa's response to this Global crisis, at the policy and strategy levels, is thus far commendable; with the release of the National policy White Paper in 2011 and rolling out of a number of support programmes, Monitoring, reporting and verification initiatives at the sub-national levels as captured in Boyd (2012). Little progress has been made in the mainstreaming of adaptation considerations into local plans.

South Africa is still far from universally attaining the mainstreaming adaptation goals set out in the White Paper both nationally and sub-nationally (CDKN, 2012). As earlier stated above, by end of 2012 only two municipalities countrywide had attained their mainstreaming goals in as far as the IDPs are concerned and had the capacity to collect data independently (CDKN, 2012, Boyd, 2012). The question remains what about the remaining 282 municipalities countrywide, comprised of 6 metros, 44 district and 226 local municipalities. How much of this thinking has actually trickled down to the local government levels where development actually takes place?

Hence the need of this study at this stage aimed at establishing why majority of municipalities have not yet fully complied with the policy directive and also assess the level of compliance among municipalities with the tenets of the White Paper on Climate Change which as Boyd (2012) puts it: The overall approach of the National White

Paper is to “integrate and align” (DEA 2011:14) coupled with prioritized “integrated planning” (DEA 2011:15) as a means of ensuring that climate considerations are mainstreamed into both the legislative and policy frameworks policy, as well as planning in all spheres of government.

1.2 MAIN RESEARCH QUESTIONS

In essence, this study attempts to answer the following key research question: what intrinsic institutional issues within the three spheres of government , particularly local government, are hindering the institutional change required by section 10 of the National Climate Change Policy. The institutional change in question being the mainstreaming of Climate Change into Integrated Development Plans(IDPs). Put in other words, why is this institutional change (Mainstreaming) not taking place, within municipalities, at the pace and depth stipulated in the national climate change Policy?

In order to fully understand the causal elements of this policy lag this study sort to explore the nature, the prescribed process and expected outcomes of this nationally determined Climate Change mainstreaming. Hence it attempted to answer the following:

- The nature of this institutional change: is it exogenous (Top-down) or endogenous (Bottom-up), what is the effect of isomorphic forces (in this case section 10, particularly subsection 10.2.6 of the National Climate Change Policy (the White Paper) and Chapter 5 of the National Development Plan: in bringing about or inhibiting the desired change.
- The process of institutional change: is this change sudden or gradual, a co-operative venture or a result of conflict.
- The outcome of Institutional change: is the emerging institution a reflection of the isomorphic.

If simplified, this study attempts to answer the following questions; is the top down policy implementation model currently in place in South Africa the reason for this lag? Or could there be a clash of interest involving the intended outcomes of policy makers versus the pressing socio-economic demands placed on the local administrators? Is the fact that policy implementation is top-down and the IDP process bottom-up causing this conflict of interest? Taking the argument further into the public administration arena particularly intergovernmental relations could there be other variables causing this lag? For instance, have most municipalities fully grasped the climate change policy requirements placed on them by other spheres of government and the urgent need for them to assimilate these concerns as part of daily operations. What's the magnitude of the problem of incapacity to effectively plan and manage the effects of global warming and is there sufficient institutional leverage and arrangements, from national to local, designed to facilitated the integration of adaptation practice across all municipal line departments. Is the lack of sufficient fiscal allocations from municipal budgets and other spheres of government for climate change integration another hurdle? In short, to what set of factors, in as far as policy implementation and intergovernmental relations are concerned, can we attribute this lack of urgency in mainstreaming climate change into municipal plans.

1.3 OBJECTIVE OF THE STUDY

The study's main objective therefore was to attempt to succinctly what intrinsic institutional issues within the three spheres of government , particularly local government, are hindering the institutional change required by section 10.2.6 of the National Climate Change Policy i.e. Mainstreaming of Climate Change Adaptation into IDPs)

1.4 THEORETICAL FRAMEWORK

To help explain these inherent challenges within Climate Change mainstreaming it is prudent to employ two analytical frameworks that will highlight the process and institutional flaws that underpin this holdup. The study employed elements from both Policy implementation research and Organization theory particularly institutional theory. From the first generation policy implementation researchers the researcher took a linear approach in trying to comprehend the aspects or rather variables that facilitate or constrain the accomplishment of tenets of the climate change adaptation policy (Paudel, 2009), from the second and third generation researchers I'm going to employ the top-down and bottom up analytical frameworks to try and understand the three dimensional intra-governmental interactions between role players at different levels, in the implementation of the adaptation policy with the aim of arriving at the causal elements of policy failure or success (Goggin et al,1990; Mclaughlin,1987; Winter, 2003). From an institutional theory perspective, the study employed the concept of Isophormism to try and determine the nature of interaction between these isomorphic forces and the structural and cultural fabric of municipalities, vis-à-vis the national policy directives on mainstreaming climate change adaptation consideration into IDPs. What peculiar differences in response to isophormic pressures exist that indicate the extent to which each municipality adopts reform and change as a measure of whether decoupling is taking place. Lastly, in the absence of these stimuli, would municipalities prioritise the climate change adaptation agenda.

Under policy implementation theory the researcher borrowed research elements from all three generations of the epistemology of policy management theory (Goggin et al, 1990). However, it is the perceived "fourth" research generation that best underlies the scope of this work. According to Conteh (2013) implementation research, in what could be perceived as the "Fourth generation", is going through a theoretical shift towards placing more emphasis on collaborative efforts that transcend institutional boundaries.

He adds that there is a conspicuous widening of perception of policy implementation from a literal to a Multi-dimensional approach involving many disciplines, levels and areas of focus that affect a wide variety of interested and affected parties. According to Schroeder (2001) policy management in general from formulation to implementation and evaluation are increasingly being regarded as a complex cross-interaction of organisations from the private, public and civil society sectors made up individuals with varying vested interests, none of which individually have sufficient clout to independently decide the plans and activities of other stakeholders. What this entails is that the achievement or failure of policy imperatives is not solely dependent on the integrity or coherence of intergovernmental corporation but also its interaction with its external environment or institutions (Conteh, 2013).

It is this understanding that bridges the conceptual gap between policy implementation theory and institutional theory relating to organizations; with its emphasis on isomorphic pressures whether it be coercive, normative and mimetic forces (DiMaggio and Powell, 1983). Institutional theory posits that institutionalized transformation, as is the case here with mainstreaming, occurs at the individual, institutional, and interorganizational levels (Oliver, 1997). According to Bressers (2004), “the course and outcome of the policy process depend not only on inputs (in this case the characteristics of the policy instruments), but more crucially on the characteristics of the actors involved, particularly their motivation, information and power”. The Conceptual framework identifies the main determinant forces behind institutionalized change particularly the integration of Climate Change concerns in IDPs. It emphasizes that decision making in institutions and the individuals making them are influenced by three facets of reference or knowing namely the regulative space, the Normative and cultural cognition(See Figure 1). It superficially highlighted the patterns of interactions between them but does not bring out the actual intricacies of these interactions in the policy implementation process at the stage.

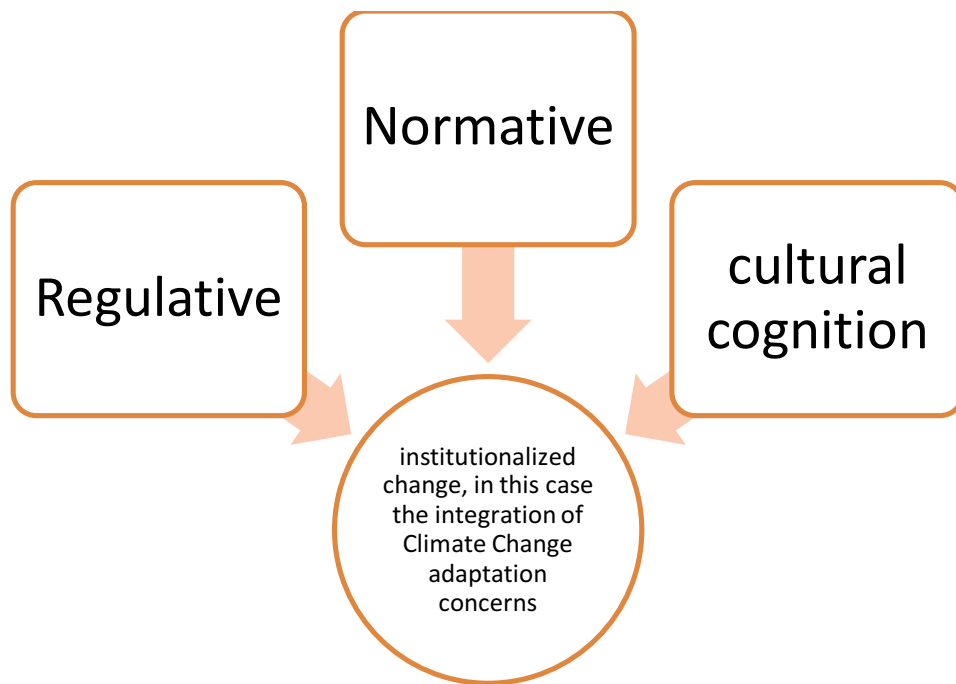


Figure 1: Conceptual Framework

At the interorganizational level, external stimuli from external players such as government, private sector alliances, and societal expectations have a strong influence on how organisations behave in conformity with commonly expected societal norms and standards (DiMaggio & Powell, 1983). At the organizational level, commonly established belief systems whether cultural, social or political tend to back the retention of the status quo. While at the individual level, the behaviour or actions of decision makers such as managers is informed by both consciously or subconsciously held individual belief systems (Berger & Luckmann, 1967). It is this interaction of a multiplicity of actors and isomorphic forces that characterize the execution of policies and the outcome of policy management is very much dependent on the net effect of these complex interactions. Organisations can therefore either conform or defy any policy directive depending on whichever one of the two actions will best further their survival or continued relevance in their institutional environment. Therefore, the extent to which actors at the three levels, identified above by Oliver

(1997), conform with these isomorphic pressures is dependent on the level of perceived legitimacy to be attained or punishment to be avoided by conforming to the prescribed change (Ashworth et al, 2009; Hafner-Burton et al, 2008; Bromley & Powell, 2012). In essence it is this affinity for legitimacy that makes organizations conform since it secures their relevance to their institutional environment and ensures their long-term survival or continuity (Zucker, 1987).

It should be noted however, that organizations do not always fully conform to their institutional environments, so often an organisation's activities are found not to be in line with its declared practices (Meyer and Rowan, 1977). Institutional theory acknowledges the substantial latitude for divergent behaviour, in spite of isomorphic pressures, by organizations; where they symbolically adopt widely accepted norms without changing how they actually function; a phenomenon commonly known as decoupling (Ashworth et al, 2009; Hafner-Burton et al, 2008). Organizations are at times known to conform for the sake of legitimacy without certainty on the substantive impacts of such action (Ashworth et al, 2009). According to Frumkin et al (2004) institutions seldom adopt strategies, structures, and processes in order to enrich productivity, but as an alternative retort to and search for means of contain demands placed on them by regulation or external scrutiny. It's this "window dressing" that is of particular interest to public policy implementation as it partly helps explain the gap between rhetoric and action, Christensen et al (2007), speaking from a cultural perspective, mainly attribute this to the natural cultural impulse to maintain the status quo, for instance opposition to reform processes that threaten dominant informal norms and values developed over long periods of time. Other studies in institutional theory assert that decoupling may also be a result of the apathy against change aimed at retaining the status quo in power relations (Dobbin, 1994) The level of defiance exhibited in an organization is dependent on its degree of autonomy from its surrounding environment, organizations or actors with greater autonomy are free to exercise high levels of decoupling (Hafner-Burton et al, 2008).

Furthermore, both Wijen (2014) and Bromley and Powell (2012), assert that the concept of decoupling goes beyond the classical definition of being the chasm separating policy formulation from practice but also includes the notion of it being the gap between means and ends in organizations that are compliant.

At the very nexus of policy and practice, decoupling is a result of failure to implement rules or when they are habitually breached. In other instances it is a result of a failure to link policy actions to the desired result, instances where the implementation of policies does not yield the results that can be clearly linked to the policy actions. (Bromley & Powell, 2012).

Policy-practice decoupling occurs when adopted policy goals or intentions are not implemented at all or are routinely violated while means-ends decoupling takes place when adopted policies are implemented but there is a misalignment between organizational activities and actual outcomes attained on the ground. According to Bromley and Powell (2012), it best to think of policy–practice decoupling as symbolic adoption, while means–ends decoupling as symbolic implementation.

1.5 THE CLIMATE CHANGE CHALLENGE

Global warming is an environmental reality that poses the greatest threat to global sustainable development in this millennium (Agrawala et al, 2008). The projected impact of climate change on the global and south African economy if nothing is done to avert global warming by 2050 is well documented (Stern, 2008; IPCC, 2007; Agrawala et al, 2008; Zierwogel et al, 2008, DEAT, 2004; Anbumozhi, 2009) and is nothing short of catastrophic on human livelihoods.

South Africa's response to this Global crisis, at the policy and legislative levels, has thus far been sterling characterised by the release of the National Climate Change response white paper in 2011 and rolling out of a number of Monitoring, reporting and verification initiatives at the sub-national levels as captured in Boyd (2012). With a lot of resources already earmarked for local livelihoods development by the government through Local Economic Development (LED) initiatives in programmes, such as Urban Renewal Programme (URP) and Integrated Sustainable Rural Development Programme (ISRDP), it's only prudent to gauge the extent of incorporation of Climate change risks into local governments' development programmes and probably suggest better ways of infusing such considerations at both policy or programme and project levels. What remains unanswered however is how much of this thinking has actually trickled down to the local government levels where development actually takes place?

The case however remains that South Africa is still far from universally attaining the mainstreaming goals set out in the White paper across all three spheres of government (CDKN, 2012); Particularly in the area of mainstreaming climate change adaptation into Integrated Development Plans (IDPs) at municipal level. As earlier stated above, by end of 2012 only two municipalities countrywide had fully mainstreamed Adaptation considerations into their respective IDPs and had the capacity to collect data independently (CDKN, 2012, Boyd, 2012). The question remains what about the remaining 282 municipalities countrywide, comprised of 6 metros, 44 districts and 226 local municipalities.

What remains a significant fact is that the change in the world's climate is more a local phenomenon than it is global or national one, since Majority of the effects are most felt at the local area levels (Meashan et al, 2011), and hence the need to dovetail all efforts aimed at combating global warming at the local level. Municipalities occupy a peculiar position in Public governance and have an crucial part to play in instituting contextualised policies and strategies that are best suited to take advantage of

opportunities and mitigate against the vulnerabilities arising from the change in climate (CDKN, 2012). With Local government increasingly being the point of convergence and synchronization for both provincial and National governments' programmes (DEA, 1998) municipalities are strategically positioned for greater impact in mitigating the impact of climate change mostly as a result of their proximity to the constituents and point of impact (Meashan et al, 2011). Consequently, in this country, like any other part of the planet, local authorities are the best suited sphere of government to tackle the shocks of climate change and this can best be done by incorporating climate related considerations into IDPs (CDKN, 2012; DEA, 2011).

Unfortunately, this has not so far been achieved universally in South Africa. Despite numerous references, to the need to climate proof the current development trajectory, in official government documents, implementation remains a challenge. For instance, in 2011, the National Climate Change Response White Paper set a deadline of October 2013 by which all government departments across all spheres and parastatals were to ensure that all their pieces of legislation, policies, strategies, programmes and projects are fully aligned with it (CDKN, 2012). This milestone unfortunately has proven too ambitious, needless to say it has not been attained in all institutions and development continues to be pursued in parallel to environmental management let alone climate Change considerations. The national development plan, while highlighting the importance of integration it concedes that this is far from being achieved and that more focus has thus far being placed on mitigation (NPC, 2012).

This lag in attaining the policy goals of Climate change mainstreaming has mainly been attributed to systematic and structural weaknesses in all three spheres of the government's institutional framework (Zierwogel et al, 2008; Faling et al, 2012; Brauns et al, 2014). However, there is need to broaden this perspective to include institutional norms and cultural fabric that govern behaviour within these spheres which in essence might underpin these weaknesses. The current government systems and structures in

South Africa contain inherent weaknesses both in processes and procedures as well as their interplay with the human factor; issues of manpower capacity and politics. In relation to mainstreaming of climate change adaptation into IDPs these challenges lie at three levels, namely:

- The inherent challenges within the IDP process itself;
- The inherent challenges with the Municipal systems and structures; and
- Lastly the inherent challenges within intergovernmental relations.

In 2011 during the COP17 all municipalities in South Africa ratified the Durban adaptation Charter, pledging to among other things incorporate adaptation concerns into IDPs. As of December 2012, only two had met the tenets of the charter. The question that begs asking is why did municipalities ratify this charter if they had no intent of meeting its requirements. Hafner-Burton et al (2008), posed a similar question when looking at “why nation states with very negative human rights records have a tendency to ratify international human right treaties”. The response to these questions lies in the very legitimating value derived from these treaties and because the cost or punishment for failure to meet their demands is very low to non-existent. For instance, was their ratifying of the Durban accord a mere quest of legitimacy and the failure to follow up with committed implementation a case of institutional decoupling? Yet another classical example of window dressing meant to achieve the ratification goal set by politicians for the COP 17 event.

Another example worth noting is that though the provincial and local governments command a fair deal of administrative, political and fiscal autonomy the policy formulation and implementation mandate remains a national function (Robino, 2009). Therefore, borrowing from policy implementation theory, it is prudent to say by design the policy implementation framework in South Africa is predominantly top-down. The problem over the years since 1996 is how to effectively enforce policy across spheres evenly (Brauns et al, 2014; Robino, 2009). It is therefore justifiable to attribute the policy

implementation gap under adaptation mainstreaming to the inherent shortcomings of the Top-Down perspective such as misalignment between policy imperatives and context on the ground and the exclusion of input from “street-level” bureaucrats in setting implementation plans and goals (Paudel, 2009). From an institutional theory perspective this can be attributed to inertia or defiant behaviour from either local bureaucrats or local politicians since it either threatens the status quo or does not hold much political benefit in terms of political brownie-points (Zierwogel et al, 2008).

Furthermore, the current fiscal decentralization setup with its equitable share allocation system fails the climate change agenda in two ways, firstly the formulas used to allocate nationally raised revenue are not sufficiently prescriptive and do not place deliberate emphasis on sustainability let alone climate change. Secondly, in the current legal framework, that governs intergovernmental relations, neither national nor provincial governments have sufficient muscle to “force” municipalities to spend their grants on climate proofing and can only use moral suasion to achieve this objective. Municipalities can in practice spend their equitable share allocations more or less how they wish, short of embezzling the funds (Robino, 2009). Therefore, faced with other more pressing service delivery needs climate Change always ends up at the losing end, as it is neither a policy nor legislative priority at municipal levels neither is it a funded mandate that Municipalities have to account on. From an institutional theory perspective much of this behaviour can be attributed to decoupling by municipalities considering that the devolved three sphere intergovernmental system in South Africa confers and guarantees great autonomy to each sphere of government. According to Bromley and Powell (2012) in the government and civil society sectors which are laden with opposing needs, overstretched human capital, and inadequate funding—external buffering- the urge to avoid disruption of in-house operations is a common practice. If looked at from an intergovernmental perspective, the lack of clear prescriptions on adaptation funding under the equitable share allocation system represents policy-practice decoupling in that while the White Paper on Climate Change Adaption clearly

upholds the need for sufficient funding to sub-national tiers of government in practice however funding is scant and non-prescriptive.

There are just a few cases in point where decentralization has failed to deliver. Ideally decentralisation produces efficiency, greater participation by people (citizenry) in government and greater accountability to the masses on the part of politicians and bureaucrats (Wittenberg, 2003), in the case of South Africa however it has produced a case of mixed blessings with the majority of cases pointing south (Elhiraika, 2007). Despite being eloquently addressed in both the constitution and the national policy on local government, decentralization has over the years proven nothing but complex to manage effectively. It has been characterized by poor communication between spheres, lack of clear distinction of mandate resulting in duplications that have been scenes of turf wars and widespread neglect citing lack of clarity of roles; lack of capacity especially at the local levels, lack of fiscal discipline and accountability as well as maladministration (Wittenberg, 2003). In light of the above, did the current White paper take into consideration these institutional flaws and put in measures to ameliorate their adverse effects? According to Fox, Bayat, and Ferreira (2006: 103 in Brauns et al, 2013), reasons for policy failure in South Africa, appear to be:

- Street level bureaucrats appointed to execute policies are indifferent and/or ineffective and in other cases despite trying their very best, were unable to or surmount the bottlenecks due to circumstance beyond their immediate control.
- Poor quality of policies due to lack of rigour during formulation; where policies are based on insufficient data, idealistic assumptions and unreasonable expectations.

This raises the need for this study; which will attempt to explain the lag in mainstreaming climate change considerations into IDPs as a means of climate proofing conventional development programmes. It will do so with a particular study of three Western Cape municipalities across all three types of municipalities in South

Africa, namely Metro, District and Local municipality. The rationale behind conducting this study across all three types of municipalities is to retain objectivity, relevance and applicability of recommendations of the final research paper across all municipalities in the country.

1.6 BACKGROUND OF STUDY AREAS

1.6.1 Snapshot of the City of Cape Town

The city lies on the most south-western tip of the country and is categorized as a metropolitan Municipality and in terms of population size its only second to Johannesburg making it the second the largest Municipality in South Africa

According to the City's IDP for the 2012-17 planning period, in 2011, Cape Town had an estimated 1 068 572 household units while the population was estimated at 3 740 026 people. The City's population is estimated to increase to 4,25 million not later than 2030 and this is expected to aggravate the range of socio-economic challenges facing the city, which include high drug use, HIV/AIDS, unemployment and high crime incidence. In 2011, the number of indigent households made up 21% of the total number of households in the city— those that applied and met the City's criteria. In the same vein 35,7% of the total number of households reported a monthly income on par with the poverty line used by the City of up to R3 500 (COCT,2012). The city's economic performance is measured in terms of its Gross Value Added (GVA) and is mainly comprised of four sectors, namely manufacturing, community services and general government, business services finance, trade and hospitality. In 2011, the city registered an average unemployment of about 23,8% across all ages (15 – 64 years) a 1.1.% decrease from the previous year's while youth Unemployment stood at 31.9% (COCT,2012).

Recent Events have highlighted how critical the city's climate vulnerable is, as it is currently going through its worst drought in over 23 years. The city is facing serious water shortages and is expected to run out of usable water in its current storage capacity infrastructure by March 2018 if nothing is done to avert the situation. The increase in cost and environmental impact of implementing new water resource schemes, potential reduction in yield of existing sources and the growth in demand for water from an increasing population poses a serious risk to secure future water supply. The city has in recent times also witnessed an increase severe weather events such as cyclones and flooding which have contributed greatly to a growing problem of coastal erosion and damage to public infrastructure and homes. Similar to other South-Coast cities and due to an increase in the average ambient temperatures in summer, Cape Town has had its fair share of forest fires and these are predicted to increase by the year 2100. Data from global climate simulations known as Global Circulation Models (GCM), show among other projected impacts; Increase in intensity of winds; a rise in mean sea level which in turn will exacerbate storm surges and, increased frequency of forest fires. GCMs have also predicted variations in the frequency, magnitude, duration and intensity of extreme rainfall events; as well as extended drought periods. From a human health perspective, Heat waves will cause a spike in cases of heat stress and proliferation of diseases caused by vectors as such as malaria (COCT, 2011)

1.6.2 Snapshot of West Coast District Municipality

The West Coast District Municipality falls within the Western Cape Province and is situated along the Atlantic western coast of South Africa and; it's about 70km north of Cape Town at its most southern end. As a Category C municipality its level of capacity is categorised as Medium. As one of five district municipalities in the western Cape; it's also comprised of the following five local municipalities with their headquarters : Bergrivier with headquarters at Piketberg, Matzikama with headquarters at Vredendal, Cederberg with headquarters at Clanwilliam, Swartland Municipality with headquarters

at Malmesbury, and Saldanha Bay with headquarters at Vredenburg (WCDM, 2013). The municipality's aggregate population is estimated at 391 767 which is one-tenth of the province's inhabitants. (StatsSA, 2011). Meanwhile, 42% of the inhabitants are youths and the greater part of households are situated in urban or peri-urban areas (West Coast District Municipality 2014b). Like most peri-urban areas in South Africa, the district has a strongly natural resource-based economy, with agriculture, fishing, local commerce and tourism counting as the most significant sectors. The main economic sectors in the District are manufacturing and mining (WCDM, 2013). Only about 53% of the population in the district are economically active – mostly in the commercial and agricultural sectors (DEA, 2017).

The district is susceptible to the following climate hazards: storms, floods, drought, coastal storm surges and veld fires (West Coast District Municipality 2014b, 2015). The forecast from the Long-Term Adaptation Scenarios Flagship Research Programme (LTAS) and as reported in the draft Third National communication, has predicted that climate change will cause an increase in temperatures and rainfall variability, while decreasing the total average rainfall in the west of South Africa (Department of Environmental Affairs 2013c). This is expected to increase the vulnerability of the district to several climate change manifestations including: increasing temperatures; rainfall variability; rising sea level; and extreme weather events (West Coast District Municipality 2013). Climate change is predicted to shift the biomes in the district, resulting in a change to the ecosystems and vegetation found in the West Coast District Municipal Area (DEA, 2013).

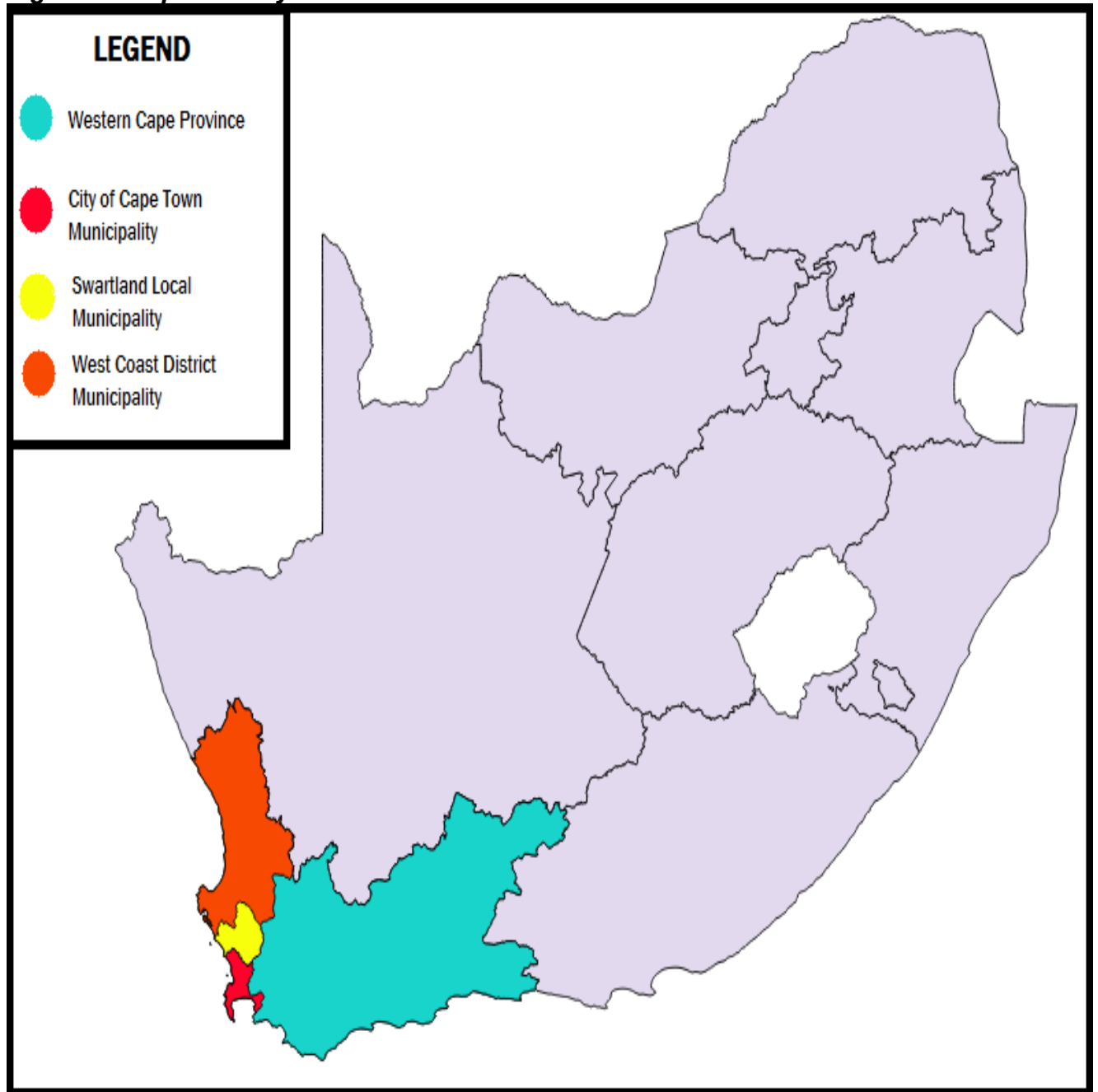
1.6.3 Snapshot of Swartland local municipality

As indicated earlier The Swartland local Municipality is part of the west Coast District Municipality and is categorised as a B municipality and has the largest share of the district's population at 120,314 as per 2015 estimates and is projected to reach 127,884 by 2020 growth at a rate of 2.6% per annum (WCG, 2015). As of 2011,

approximately 12.2% of its 30,276 households lived below the poverty line i.e. 3 694 households earned less than R400 per month. In the same vein, 28.2% of households earned below R1600 per month and the Gini-coefficient of the area stood at 0.58 as of 2010 (Swartland Municipality, 2013). The economically active age group of between 15-64 years comprises 68% of the population and make up 24% of the west coast district Municipality's employment rate, while the unemployment rate for the Swartland area stood at 12.73% as of 2011. The largest employer in the municipality is its commercial services sector, As of 2013 it retained the largest portion of the Municipality's working class at 41%, agriculture is second at 22%, third is government services at 17% and lastly manufacturing at 13% (WCG, 2015).

At present and in terms of Vulnerability to climate change the Swartland area is susceptible to fires, drought, extreme temperatures and strong winds, floods and animal-based vector bone diseases such as African Horse sickness, Rift valley fever and Newcastle disease (Swartland Municipality, 2013). Despite the uncertainty and lack of statistically significant climate change trends for the Swartland local region some extrapolations have been made based on global climate simulations known as Global Circulation Models (GCM), to predict the expected changes in climate by 2100. (Swartland Municipality, 2013). The rainfall projections for the Swartland area show results of a strong drying trend, which will amplify over time while Temperature projections show general rising temperatures that are outside of the natural patterns of variability (DEA, 2013). The Swartland Vulnerability study shades some light on what some of the impacts of these changes will be; reduction in crop yields and induced change of cultivars, changes to disease and pest outbreaks, shorter rainfall periods with increased drought conditions, increased risk of doing business in the area mostly due to natural events and damage to infrastructure among other things.

Figure 2: Map of Study Area



1.7 RESEARCH METHODOLOGY

The following theoretical propositions formed the basis of the study and informed the choice of the research design and methods. From a policy implementation theory

perspective data collected was used to discover flaws in and to improve existing social theories (by Harrison et al, 2008; Faling et al, 2012; Zierwogel et al, 2008; Brauns et al, 2014 and Robino, 2009) which assert that the lag in mainstreaming adaptation considerations into IDPs is due to institutional weaknesses within spheres of government such as, firstly, insufficient fiscal allocations forcing municipalities to priorities other pressing socio-economic needs, secondly, as far as legislation is concerned there is a vagueness in mandate , thirdly, institutions lack the capacity to deliver and lastly, political interference. Meanwhile from an institutional theory perspective the study attempted to counter argue or substantiate the theory of institutional decoupling (Ashworth et al, 2005; Bromley & Powell, 2012; Hafner-Burton et al, 2008; Frumkin et al, 2004) that institutions resort to window dressing when faced with external isomorphic pressures requiring internal changes as a way of self-preservation and legitimisation.

1.7.1. Research design

Informed by these prepositions the study employed the qualitative multiple-case study research design informed by the need to assess progress on mainstreaming from all three types of local government in the country namely metro, district and local councils. This design is therefore, best suited for this study's data needs as well as the need for a detailed understanding and insight (Mouton, 2008) into the Climate Change mainstreaming processes across all case studies and the various challenges thereof.

In undertaking the research, a variety of research and assessment criteria were employed based on the ethos of Triangulation. Both literature review and interviews were conducted as key methods of collecting data and the various sources of information collected were triangulated to ensure objectivity and accuracy of collected data. Semi-structured open-ended question schedules were tailored for each department or organisation interviewed with the objective of uncovering further information and going into more depth on certain issues than provided for by the

appraisal tools provided. Allowance was given for probing follow-up questions aimed at bringing out certain aspects in more detail and thus catering for context. During the interview the researcher took detailed notes which were later reread, verified, and collated during data analysis and report writing (Christoplos & McGinn, 2016)

1.7.2. Data Analysis

Analytical induction techniques were used to systematically examine data to find similarities and connections with the aim of finding casual relationships and be able to explain the nature of these relationships. The analysis of data was mainly qualitative with a few expected cases of numeric data.

1.7.3. Study Limitations

While the data presented in this study is a liable and its veracity can be authenticated by the researcher as valid accounts of the opinions and experiences of the government officials interviewed there were some shortcomings of both an ethical and operational nature. Firstly, there were time and budget restrictions in terms of a short window to collect the data and a low budget which in turned greatly limited the scope and extent of both of data collection and analysis.

A second limitation is inconsistencies and discrepancies in the data provided in certain sectors which is indicative of a lack of a data management system in some City departments.

The third hurdle was social response bias whereby respondents gave agreeable answers rather than the actual reality. For reason ranging from confidentiality which comes with non-disclosure clauses to attempts of wanting to present the respective municipalities in good light, some responses needed more time to be verified.

1.8 STRUCTURE OF THE DISSERTATION

The dissertation is divided into five Chapters. **Chapter 1** begins with an introductory overview of the challenge of global warming and provides a counter-argument for the need to urgently mainstream adaptation concerns into IDPs. The chapter also provides a general background of the study area; explaining the typology of the municipalities that constitute the study area. The objectives of the study and the methodology employed as well as the limitation of the study are also provided.

Chapter 2 is dedicated to the review of the most contemporary literature on the global challenge of Climate Change; mainstreaming best practice from a global perspective; South Africa's response and the challenges the country is facing in effectively responding to climate change are outlined. More importantly, the chapter outlines the two schools of thought namely policy implementation research and organisation theory particularly institutional theory that form the analytical framework of the study. The two-pronged framework is used to explain the policy implementation lag across public organizations in South Africa and particularly within the Climate change mainstreaming arena. Institutional decoupling is identified as the underlying cause of policy implementation failure in the mainstreaming space.

Chapter 3 outlines the Research Methods adopted for the research, highlighting the research design and the tools used in both data collection and analysis.

Chapter 4 presents the results, analysis and theoretical interpretation of the data to determine how municipalities are responding to the mainstreaming policy directives from the national government and what factors at the local levels are contributing to policy failure.

Chapter 5, the closing chapter, encompasses the discussion, conclusions and

recommendations to policy makers

1.9 CONCLUSION

This chapter has justified the compulsion for the study, highlighted the aims, the key research questions, study areas, the problem statement and significance of this research project including the limitations of the study as well as the structure of the dissertation. The following chapter is a review of contemporary literature that highlights current best practice on climate change mainstreaming.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Global warming and its resultant impacts are an environmental and socio-economic reality that poses the greatest threat to the global development agenda this millennium. Even the most conservative of simulations forecast that the ambient global temperatures will increase by around 1.8 0c to 6 0c from the estimates observed at the turn of the 20th century and nothing can be done to reverse this trend even if current and future emissions are curbed (IPCC, 2007). Therefore, global warming is happening and its impacts are inevitable; the world over and in particular the developing world needs to adapt or bare the blunt of the uncertainties of the changing climate. As earlier alluded to in section 1.9 this chapter reviews the most contemporary literature on the global challenge of Climate Change, highlighting what mainstreaming is; why it's an important element in the global response to climate change; the current best practice internationally and lastly an outline how South Africa has fared in this aspect. Sections 2.2 briefly outlines the need for an integrated approach at the Municipal level, while 2.3 explores the threat climate Change possess to sustainable development particularly that of the developmental South. Section 2.4 explores what is meant by Mainstreaming or climate Proofing; highlighting the "best-Practice" of mainstreaming as recommended by the OECD and other scholars globally. Sections 2.5 and 2.6 then look at how South Africa has fared in as far as mainstreaming is concerned based on the yardstick set in the preceding section. Lastly, section 2.7 then looks at what causes policy implementation failure with the hope of shading more light on what is causing the lag in the South African context.

2.2 THE NEED FOR AN INTEGRATED APPROACH TO CLIMATE CHANGE

A drastic change in weather patterns; as been projected as one of the main results of global warming and will be characterized by a rise in the variability of the amounts of rain fall coupled by a change in seasonality, and a parallel escalation in the frequency and magnitude of natural hazards such as tropical cyclones, floods, heat waves and droughts (Agrawala et al, 2008). The worst impacts of these extreme events in the form of loss of lives; damage to property and infrastructure, loss of livelihoods, proliferation of vector borne diseases and forced migrations, will be mostly felt at the local levels of the poorest nations, to be particular those in Africa, South America and South East Asia (IPCC, 2007). If unabated Climate change has the potential to reverse decades of developmental gains and drastically change the way hundreds of millions of people live on earth; it is therefore as much a socio-economic and local issue as it is a global and environmental one. This bring to the fall the need for consented efforts at the local levels, to address this threat, with government, particularly local government taking the lead in creating an enabling environment and galvanizing all relevant stakeholders for Climate change adaptation. Local governments as the arm of government that is closest to the people have the greatest prospects of abating the impacts of a changing climate; however, their path is not without challenges.

As far as this country in concerned, the 1996 adoption of the current constitution provided the underpinning for South Africa's decentralized three tier government system with each sphere, namely national, provincial and local, being ideally autonomous politically, administratively and financially (Schoeman, 2006). What this autonomy really meant is that municipalities had now been handed self-determination in areas of policy and fiscal management; and positioned them as the epicentre of sustainability planning and management in South Africa. Consequently, the demands placed on local government in South Africa, since then, have increased exponentially both in diversity and magnitude thus imposing tremendous pressure on most of the already ill-capacitated municipalities. These diverse challenges have underscored the need to plan in an integrated and sustainable way (Urquhart et al, 2002), taking into

considerations the social, economic and environmental variables at all times in order to optimize resource allocation and use in order accelerate service delivery (DPLG, 2006). Since then however, the road has not been smooth sailing; municipalities have performed dismally in most cases. And in as far as integrated planning is concerned, they have been overwhelmed by the magnitude of the development needs of the South African people and have neglected other development imperatives like Climate Change (Harrison et al, 2008; Faling et al, 2012, CoGTA, 2009).

Municipalities are required to guarantee that climate change considerations are incorporated into all decision making processes(policy, legislative and planning) across all departments and in all plans, policies and programmes (DEA, 2011). This lag in integration has generally been attributed to resource constraints, the lack of institutional capacity and clarity on roles and responsibilities; poor planning and implementation resulting in massive backlogs in service delivery (Faling et al 2012).

2.3 THE THREAT OF GLOBAL WARMING TO SUSTAINABLE DEVELOPMENT

As stated earlier global warming is currently the greatest threat faced by man and unless addressed in a decisive and integrated way the age of Anthropocene will have devastating effects on mankind and the world as we know it (Agrawala et al, 2008). The envisaged impacts on the global and national economy if nothing is done to avert global warming by 2050 is well documented (Stern, 2008; IPCC, 2007; Agrawala et al, 2008; Zierwogel et al, 2008;2014; DEAT, 2004; Anbumozhi, 2009, Kaijage, 2011, Turpie et al, 2013) and is nothing short of catastrophic on human livelihoods. According to Zierwogel et al (2014) there has been a 1.5 times increase in Mean annual temperatures above observed international mean of 0.65°C in the last 50 years. Meanwhile there has been a corresponding increase in the frequency of extreme rainfall events. A warming of about 3-6°C by 2081-2100 has been predicated by both South Africa's own localized and downscaled assessment models, as

captured in the 2013 South African Long-Term Adaptation Scenarios projects and the 5th assessment report of the Intergovernmental Panel on Climate Change (IPCC) (DEA, 2013; IPCC, 2014).

2.3.1 Impact of Climate Change on Sustainable Development

According to Mukheibir (2007) climate change imposes added strain on physical and financial resources of nations thus directly impacting sustainable development. In fact resources in peri-urban and rural communities often are scarce or lacking entirely and hence any further stress on these resources, at either a community or household level, can potentially hinder the attainment of development goals at the local levels. It's prudent then to note that Climate change should not only be regarded as an environmental issue but as a social and economic matter as well because it will have direct and indirect adverse effect on service delivery sectors such as water and sanitation, solid waste, food security, housing, transport, energy and health just to mention a few. According to Professor Richard Odingo, vice-Chairman of the IPCC, *"Climate change will make it impossible for the world to achieve the Millennium Development Goals. Poverty is bound to increase. Food insecurity is bound to get worse."* (as captured in Davies et al, 2009).

These shifts in climate will cause an escalation of both the regularity and enormity of natural hazards such as flooding, droughts, heat waves, storm surges, sea level rise and cyclones thus drastically changing life on earth as we now know it. These trends will in turn induce a strain on human activities, which are in most cases seasonal and natural resources based. For example, the untimely availability of water and extremes in temperatures may result in the extinction of certain plant species essential for human dietary, social and monetary needs, thus affecting livelihoods (Kaijage, 2011). In addition, there will be a decline in agricultural yields; trade routes will also be modified, rise in sea level, glacier retreats and an increase in disease vectors (OECD, 2009). The South African country studies, commissioned by the Department of Environmental Affairs and Tourism (DEAT, 2014), have identified sectors with above

average Vulnerability ; namely, biodiversity across both flora and fauna, water, health, maize production and rangelands. So in essence Climate Change will exacerbate South Africa's water and food insecurity, vector borne diseases, infrastructure loss and maintenance costs and a decline in ecosystem services.

According to the United Nations, 90% of sub-Saharan Africa's Agriculture relies on rain for production, in other words its rain-fed and the sector constitutes 35% of the region's gross national product as well as for 70% of the region's employment. Recent climate change models indicate that crop yields could fall by 20% thus drastically affecting the sector and thus threatening the livelihoods of farming dependent households and food security on the continent. According to Nkomo et al (2006), "under a business as usual scenario, a temperature increase of between 2°C and 3.4°C increase could, by the 2050s, result in between 12 million and 70 million people respectively at risk from hunger as a result of falling crop yields".

South Africa's Water shortages are projected to worsen as a result of increased average temperatures which will in turn intensify water losses due to higher rates of evapo-transpiration. A reduction of rainfall to as much as 10% in interior regions are predicated; in the next three decades the country will experience severe water shortages resulting in the loss of Biodiversity and reduction in grain yields as a result of Climate Change (DEA, 2011). These water shortages will also put a strain on household and commercial water supply thus in-turn adversely affecting national production and economic growth strategies such as the Accelerated and Shared Growth Initiative for South Africa (ASGISA) whose growth projection of 6% will be rendered unattainable.

Climate change will also cause an emergence of diseases not endemic to certain locations due to increases in temperature and alteration of rainfall patterns. For instance, Nkomo et al, 2006 assert that 7.8 million South Africans will be at risk of

contracting malaria by 2100 as a result of the area suitable for malaria doubling by the turn of the century. Meanwhile the central interior and eastern seaboard of the country will experience an increase in both water and vector borne diseases as a result of projected increase in precipitation (DEA, 2011).

In South Africa desertification is already a problem, and its projected that climate change will exacerbate the encroachment on all land use types. Climate models predict a decline in areas of land under vegetation, of up to 55% in the next 50 years. Similar modelling suggests a general acidification of land in the already drier western regions causing a reduction in maize yields of up to 20%, due to rainfall and temperature changes (DEA, 2011). According to Kaijage (2011; 2012), It has been forecasted that the west coast Karoo region which is home to approximately 3,000 species which occur nowhere else in the world, will dwindle in size with a high possibility of complete destruction of the habitat through desertification.

In 1990, the IPCC suggested that human migration will be among the severest casualties of global warming. According to the International organization for Migration (IOM, 2010) while the correlation between migration and the environment has always been recognized as fundamental, today's global challenge of a changing climate is anticipated to augment the levels of complexity to this nexus. IOM postulates that by 2050 the number of displaced persons due to climate change and environmental degradation will vary between 25million and 1 billion. Agrawala and Fankhauser (2008), argue that about 40million people, across the world, already bear the blunt of coastal flooding events and the number is expected to rise to 150million by 2050s,. The main result of this will be induced migrations from less developed and more vulnerable areas to more developed and safer areas. In developing countries this might add a whole new twist to the already rampant trends of migration to urban centres, consequentially accelerating urbanization, due to an influx of environmental refugees, across all major urban hubs in the developing world.

The built environment will also suffer direct impacts from disasters such as typhoons, storm surges, floods and increase in temperature. Inundation and washing away of utility infrastructure such as roads and bridges, storm drains, water and sanitation and electricity lines will become commonplace; while the temperature rise will escalate the rate of wear and tear (Gill et al, 2007; Koetse et al, 2008; NOAA, 2010). In the 2010-11 financial year alone, the Western Cape Government spent over R1billion on replacing and repairing damaged and washed away infrastructure (DEA, 2011) thus diverting funds from other developmental needs.

While at a Macroeconomic level, there is sufficient indication that South Africa's GDP would decline by a factor of as much as 1.5% by 2050 – an amount that is equal to the country's current total annual foreign direct investment (FDI) (Turpie & Visser, 2013) This in turn presents numerous risks to broader poverty alleviation efforts , economic growth, , and the attainment of the global developmental goal (ADB et al., 2003; Stern et al., 2006).

In essence and as highlighted above, Climate shocks present a serious threat to the world's twin problems of poverty and inequality in that their effects are asymmetric across socio-economic strata, gender and geographical location, exhibiting both intra and inter-country variability. According to economist Nicholas Stern, "The two defining challenges of the 21st-century," "are the uncertainties and impacts of a changing global climate and continued war against poverty and inequality. Any likelihood of us failing in one will spell a similar fate for the other.. It is predicted that the world's poorest will be the most affected particularly in the Least Developed Countries (LDCs) and Small Island Development States (SIDS) (Stern, 2008; IPCC, 2007). Despite being the least contributors to global emission levels Non-annex 1 countries (developing countries) will bear the worst impacts due to their low capacity to adapt and mostly due to the fact that economies in most developing countries are extractive in nature

and depend on sectors such as fishing, agriculture and tourism which are highly vulnerable to climate Change (OECD, 2009). Africa's contribution to the total global greenhouse gas emissions stands at a meagre 3.8% however its estimated that the continent will be unduly impacted by the changes in climate, thus threatening to widen the existing gap between the North and the South (IPCC, 2007). This highlights the continent's crucial need to enhance its adaptive capacities to Climate impacts. Nationally, the national Climate Change policy (DEA, 2011) recognizes high levels of poverty and unemployment in South Africa as a critical vulnerability that could be severely worsened by climate change. According to Statistical South Africa's 2015 poverty Lines report (i.e. rebased poverty lines) 21.7% of South Africans live under extreme poverty while overall poverty levels now stands at a staggering 53%. Therefore, in light of the country's staggering incidences of poverty and inequality, climate impacts are a critical threat to the nation's development (DEA, 2011). They will have unprecedented and devastating impacts on South Africa's economic and social landscape; primarily threatening the livelihoods and general wellbeing of mostly poor South Africans, across the country, who have less adaptive capacity (Turpie & Visser, 2013). Davies et al (2009) highlight that the social dimension of a change in climate has differentiated impacts; it is the vulnerable groups such as women, children and the elderly that are also expected to be the most affected especially those in rural areas due to their close reliance on ecological services. The impacts of climate change will exacerbate gender inequality and aggravate the exclusion of vulnerable groups from gleaning the benefits of mainstream economic growth.

Furthermore, the predicted impacts will not be evenly spread across the country instead they exhibit a spatial variation which will split the country into two major impact zones namely: the eastern seaboard and central interior region, and the Northern and Western Cape region. South Africa's Second National Communication Report to the UNFCCC highlights a spatially differentiated distribution of climate change impacts, while impact studies show a country wide average increase in Temperature of 3-6°C

the eastern seaboard and central interior of the country are likely to experience increases in precipitation with increased run-off, while much of the Northern and Western Cape are likely to experience decreases in precipitation runoff (DEA, 2007). These variations in climate change impacts will cascade down to the local levels and hence the poor in various locations in the country will face different challenges posed by climate change.

Table.1 provides an overview of the projected climate change variables and their respective impacts on human life.

Table 1. Chart on projected impacts of Climate change in South Africa.

Climate Stimulus	Projections	Impacts	Sources
Temperature	By 2050 South Africa's coast will warm by around 1 to 2°C and the Interior by around 2 to 3°C. By the turn of the century (2100) temperatures will reach 3 to 4°C along the coast and 6 to 7°C in the interior	Serious health implications for humans: rise in cases of heat related stress and vector borne diseases due to changes in average temperatures.	South African SNC under the UNFCCC South African Climate Change Response White Paper
Precipitation	Increased rainfall along the eastern coastal regions as	-Increased occurrences of flooding in the	South African SNC under the UNFCCC

	well as inland and drying trends projected over the south-western winter rainfall region	eastern and interior parts of the country while increased drought occurrences for the western winter rain regions characterized by water shortages; -Increase in waterborne diseases in the interior	South African Climate Change Response White Paper
Superficial water flow (surface water)	A 60% increase in surface water flows for the eastern and interior; while a 20% decrease in the South Western Regions	Decrease in quality of portable water through contamination resulting in deterioration of water sanitation	South African Second National Communication National Climate Change Policy
Changing rain patterns (climate variability)	-Upward shifts in rainfall intensity and increase occurrence of storms	-Increased chances of occurrence of hazards like flooding and droughts leading	South African SNC under the UNFCCC South African Climate Change Response White Paper

	-Shorter rain seasons with reduced average rainfall in the South Western regions	to deterioration in human health and increasing poverty -Negatively affect livelihoods and human settlements due to flooding	
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Note: the project Area falls within the Northern and Western Cape Regions with projected decrease in rainfall and increased occurrences of Hazards like droughts and heat waves.

2.4 INTERNATIONALLY RECOMMENDED RESPONSES

With reference to the envisaged impacts of climate change on sustainable development and putting in mind that climate change is already happening and nothing can be done to reverse its current impact trajectory the central issue for Africa and South Africa in particular is adaptation (Kaijage, 2011; Mukhebir et al, 2006; Anbumozhi, 2009; Olhoff et al, 2010). In this context, adaptation defined as “*adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects*” (Leary et al., 2008). In essence Climate Change adaptation is all about building *resilience*; the ability of countries, communities, households and individuals to cope with climate change (Lebel et al., 2012). The core factor for Adaptation is to create communities that can withstand and recover from shocks/stresses caused by climate change and in certain instances be positioned to capitalize on the opportunities brought about by it. From a development theory perspective Adaptation is all about climate proofing current sustainable development pathways in order to achieve both growth and human development goals, while ensuring that these goals remain on track despite an increase in climate

change impacts and that they be attained within the carrying capacity of the available resources base.

According to GTZ (2010), Climate Proofing is a methodological approach aimed at incorporating issues of climate change into development planning and implementation processes. It involves the assimilation of adaptation considerations into national and sub-national development plans and strategies in a process commonly known as adaptation mainstreaming. The United Nations' Poverty-Environment facility (UNpei, 2007) posits that, climate change adaptation mainstreaming is focused on shaping government plans, budget processes, sector strategies and local level implementation-with the overall aim being to establish enduring institutional processes within government, from national to local levels, within the wider stakeholder community. Climate Change adaptation mainstreaming therefore, "takes place at three levels: i) project/community; ii) sector regulation and compliance; and iii) policy and planning level (short- and mid-term policy making and planning at sub-national level and national strategic development planning) (ADB, 2005)." Ideally, this is meant to be a two-way process where local climate change impacts and adaptation strategies inform national policy and strategic planning processes and vice versa. From an institutional perspective, it calls for the establishment of new institutions, development of the capacity of existing ones and ensure both their vertical and lateral alignment. Lebel et al (2012), however, recommend that it is more effective and easier influence prevailing legislative and policy framework as well as best practices, than inventing the wheel completely. In essence, climate change Adaptation is all about managing change, making adjustments in the way institutions function so as to best position them to effectively address the impacts of climate change especially the ones that affect poverty alleviation goals. According to Leary et al., 2008; Kaere, 2009; Conway, 2009 (as captured in Kaijage, 2011)

Adaptation adjustments vary both in spatial and temporal scale. Generally, it may involve wide adjustments in a specific action (e.g. adopting drought resistant crops),

or systematic change (e.g. rural livelihood diversification), or institutional reform (e.g. change in ownership and user right for better natural resources management) or it can be a process (requires learning about risks, evaluation of response, creating enabling condition, etc.)

In order to be effective and realizable these adjustments need to be captured as and supported by legislation, policies and strategies and they need to cascade from a national level all the way down to local levels informed by both global trends and contextualized local needs. The state, therefore, and particularly municipalities need to respond with appropriate policies and strategies aimed at combating these diverse impacts in a way that takes local context into consideration. These responses strategies will have to be organically grown, informed by locally prevailing conditions and projected impact scenarios. Both national policy makers and street level bureaucrats responsible for developing sustainable development interventions need to consider the projected scenarios especially when planning poverty alleviation strategies to ensure that they are tailored to withstand locally prevailing climatic challenges (OECD, 2009).

Africa needs to climate proof its development pathways and this will require adopting necessary institutional changes in the form of legislation, policies, structure and strategies sufficient to meet the challenge that lies ahead. The continent's vulnerability to climate change from both a disaster risk perspective and the imminent threat to its sustainable development ambitions, positions adaptation as a key developmental agenda item (Nkomo, et al, 2006; Kaijage, 2011). From a review of literature primarily that emanating from the developing world a three-phase approach to mainstreaming has been recommended for developing countries (ADB *et al.*, 2003; OECD, 2009; UNpei, 2007, Lebel et al 2012, UNDP-UNEP, 2011, World Bank, 2010, Smith et al, 2006). See figure 2.1

- Understanding the Sustainable Development-Adaptation nexus and it speaks

to pro-poor growth;

- Integrating Adaptation into development pathways at National, sectoral and local levels
- Building implementation capacity.

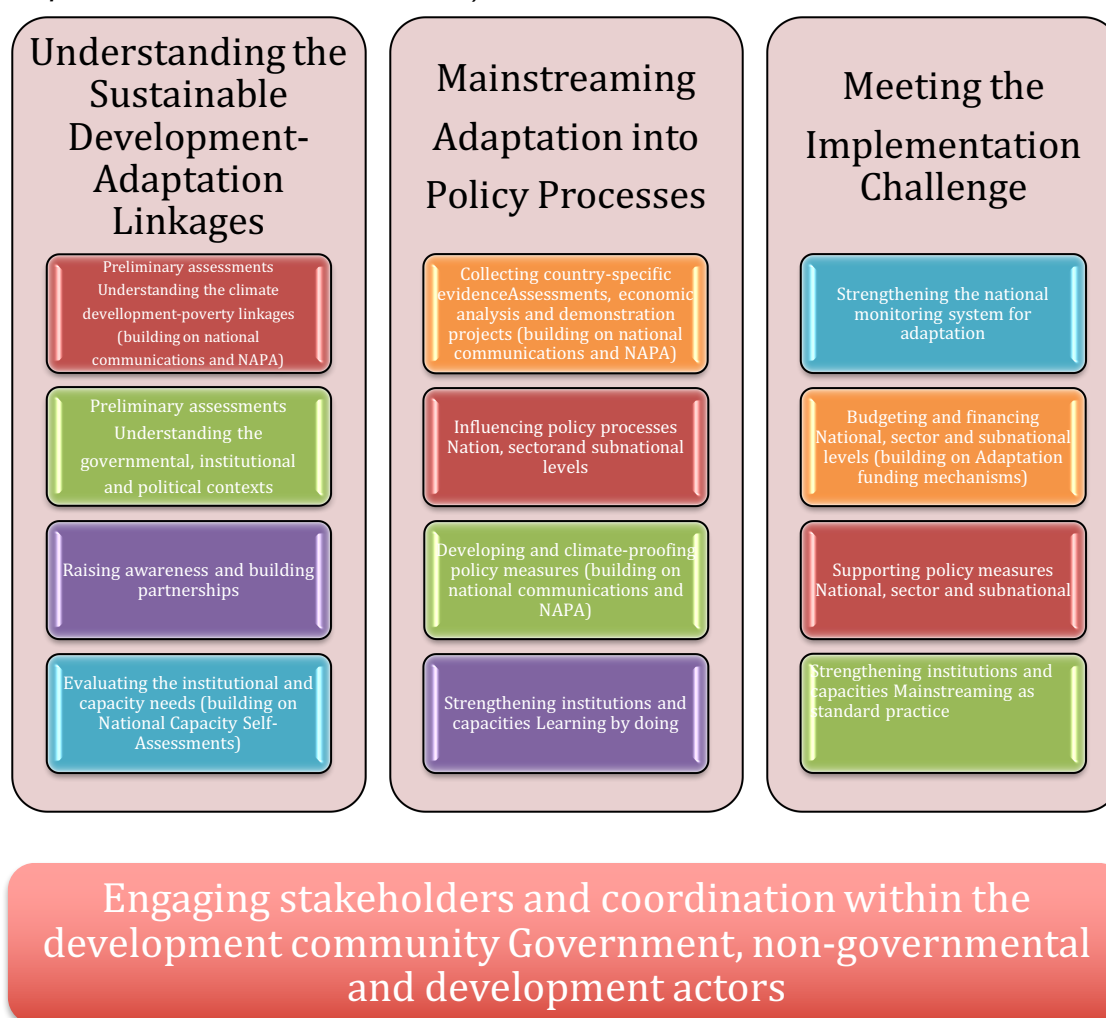
The following sections outline the recommended processes of integration at all levels as part of a national response strategy. While there are variations in the specific actions taken at each level the generic mainstreaming process is the same and can be applied to all three levels.

2.4.1 Understanding the Sustainable Development-Adaptation Links and their significance to Pro-Poor Growth

This primarily involves assessing the magnitude of the risk including the country's exposure, in other words conducting a vulnerability assessment of relevant localities and sectors vis-à-vis its sustainable development goals and attainment of international goals such MDGs/SDGs. As a point of departure it's important to ensure that the whole process is evidence based; that all decisions are informed by the best available adaptation data on present and projected risks and vulnerabilities and how changes in future will affect development (OECD, 2009). Additionally, the estimation of future risks and Vulnerabilities should also be accompanied by a review of possible opportunities that climate change may present and how best to capitalise on them (World Bank, 2010). Institutions are also assessed, these include government, private and civil society stakeholders, their respective capacities and comparative advantages are highlighted and areas of complementarity and conflict identified as part of the national strategy to deal with the challenge of climate change. The UN system under the UNFCCC has developed a system of national assessment mechanism namely National communications and National Adaptation Plan of Action (NAPA) for Mitigation and Adaptation respectively. According to Lebel et al (2012), such assessments are also meant to identify the entry points for mainstreaming, these may be National Plans,

poverty strategies or sector policies that hold great potential for advancing the climate proofing of sustainable development pathways. The empirical data amassed from these assessments assist policy makers in making a strong case for adaptation; raising awareness of the impacts of climate change if left unattended; garnering the needed support from stakeholders and leveraging necessary budget allocations from government and investments from both private and civil society.

Figure 3: Sustainable Development-Adaptation Framework for Mainstreaming (as adapted from UNDP-UNEP, 2011)



2.4.2 Integrating Adaptation into National, sectoral and sub-national Development Processes

Since Climate change is a far-reaching challenge to development, it needs to be assimilated into the national, sectoral and sub-national governance organization and processes (OECD, 2009). This does not exclusively entail the development of new policies, plans or structures but rather an adjustment of existing ones in order to ensure that they are better positioned to respond to the challenges of a changing climate.. This can be achieved at three main levels, 1) alignment of government structures, 2) Modifying the regulatory framework and standards in order to address present and future risks, and 3) Integrating adaptation into the national, sectoral and sub-national policy making process (including sectoral planning and resource allocation stages)

2.4.2.1 Alignment of government structures

As earlier alluded climate impacts are crosscutting they transcend geographical and sectoral boundaries and hence require global and cross-sectoral integration. In the case of South Africa, vertical integration will require international bodies, all spheres of government; national and sub-national institutions to work collaboratively (UNDP- UNEP, 2011; World Bank, 2010). While lateral integration will require government departments to work interactively among themselves; and with both the private sector and civil society.

Being a cross-cutting developmental issue climate change and particularly adaptation doesn't have to be championed by a sector department such as the department of Environmental affairs, as has been the case in most countries reviewed (ADB et al., 2003; OECD, 2009; UNepi, 2007) this only leads to weak inter-sectoral coordination. In order to ensure the success of adaptation mainstreaming it's imperative that the coordination of adaptation be done by centres of power in the national and sub-national governments (OECD, 2009). The office of the President or Prime Minister, the Premier or Mayor come highly commended for this role because they have both the

clout and mandate to effect change and the needed coordination of a multiple sectors (World Bank, 2010). There is also need to establish and manage inter-sectoral coordination platforms such as climate change inter-ministerial committees under the chairmanship of the presidency primarily to avoid the silo mentality with the duplication and wastage of allocated resources that often characterises such an institutional culture. This rationale, of structural alignment, should also cascade to sub-national levels; there should be alignment and synergy at all levels of government structures. These cross-sectoral committees at sub-national levels are to be chaired by the premier and mayors.

Furthermore, there has to be strong linkages between Disaster Risk Reduction and climate change adaptation structures, the latter should be an integral part of all national disaster management strategies as most of its projected impacts fall within the disaster management space.

2.4.2.2 Modifying regulations and standards

One of the main functions of both national and sub-national governments is to administer statutory regulatory frameworks across all relevant sectors (OECD, 2009). These rules and standards govern conduct at all levels thus enabling the enforcement and realization of policy goals. A regulatory framework that is climate change adaptation sensitive would therefore ensure the enforcement of adaptation mainstreaming at all levels of governance. Such a framework should include concurrent legislative instruments cascading from National to sub-national levels; an alignment of Acts, Gazettes and bye-laws. There should also be transversal cross-sectoral alignment, ensuring that climate change adaptation is also reflected in sector specific laws such as Transport, human settlements and disaster management (UNpei, 2007). These frameworks however should avoid the common pitfalls of over-regulation; allowing for flexibility at all levels of implementation by devolving, as much as possible, decision-making authority to sub-national levels (Smith et al, 2006).

2.4.2.3 Integration into National, sectoral and sub-national Policy cycle

So besides the need to coordinate the mechanics of the legislative aspects the incorporation of adaptation concerns at various stages of policy management at all levels of governance is imperative (OECD, 2009). The policy management cycle is made up of four stages: policy formulation, planning, resource allocation and programming and implementation. Mainstreaming should take place at all four stages since each stage has significant downstream implications. Failure to incorporate climate change adaptation at any stages makes adaptation planning and implementation difficult and increases the chances of failure at subsequent levels. National and sub-national policies can be categorized into two categories based on time horizons, the long-term visions (15-20 years) and the shorter-term ones (3-5 years); these inform the government's development agenda during their tenure and influence both operational plans and resource allocation during these durations (OECD, 2009). Given the potential that the impacts of climate change have to reverse decades of developmental gains it is imperative that all existent policies are screened for possible maladaptation or conversely their potential to miss opportunities brought about by climate change. A climate lens is defined by the OECD as an analytical process/step/tool designed to interrogate a programme, Plan, regulation or policy, for climate aspects and ought to be employed throughout the policy management cycle. The intention is to verify whether the plan, Programme or policy is vulnerable to climate change.

It is imperative to note that the sectoral and sub-national level policies need to be aligned to the national policy framework and it's at this stage that policy guidelines at national level are deciphered into sub-national and sector plans that can then be operationalised and resources mobilized to fund their implementation (World Bank, 2010).

2.4.2.4 Planning and resource allocation

Meanwhile, at the planning and resources allocation stages, concrete adaptation sensitive actions and budgets should be developed. By design a national budget be it an annual or MTEF is the foremost mechanism for operationalizing a government's policy. In order for implementation to take place at subsequent process and structural levels resources will need to be made available and prioritized to the most vulnerable areas and sectors where urgent need for intervention is needed (World Bank, 2010). These budget allocations should not only be stand-alone adaptation funds to be accessed through lengthy bureaucratic process but should be mainstreamed into sectoral allocations such as government infrastructure grants to municipalities aimed at funding the adaptation components of all public works projects.

2.4.2.5 Integrating Climate Change Adaptation into the Local development process

In any given system of governance, the ultimate end of any policy or planning process for development is at the local government. The term Local government is commonly used to denote a level of organized government that is nearest to the constituents and is composed of political representatives elected by the people and street-level bureaucrats appointed locally or by either provincial or national government spheres. Collectively their main function is to govern in a transparent and accountable manner by making decisions that serve the service-delivery needs of the people (Tyler, 2006). These local authorities are important to the Climate Change mainstreaming process because they are the level of government closest to the people and consequently, being at the forefront of government are in more direct contact with the citizenry and can be better held accountable than the other spheres of government (OECD, 2009). This close interaction, depending on the organizational culture within the local authority, can result into a more receptive and accountable local authority, which is vital for climate change adaptation mainstreaming.

All the mainstreaming processes outlined above should be replicated at the local level. However, caution should be taken because while climate mainstreaming at this level is imperative, there isn't a generic approach or a one size fits all approach to this. A large amount of emphasis should be placed on contextualizing the policy and regulatory frameworks, the collection and analysis of climatic data as well as ensuring that both the planning and resource allocation processes are sensitive to the locally prevailing conditions. Local development plans on the other hand, though not a full-proof generic panacea for the complexities of mainstreaming provide a highly recommended entry point for local adaptation mainstreaming. Local development plans are the blueprint for local economic and human development goals and hence a national climate change agenda should be reflected at this level and vice versa. It should not only be a top-down process but a bottom-up process as well; many of the national processes should be inclusive of the sub-national actors to ensure common ownership and inclusion of the local context. This approach most often guarantees success as it is participatory and inclusiveness of the local voice (World Bank, 2010).

It should be noted however, that in spite concerted efforts in the past decade or so to create conducive environments and identification of entry points, mainstreaming at the local government level still faces a lot of challenges. Local governments are not without challenges; they range from lack of human resource and revenue collection capacity, lack of local climatic information; competing local (and national) priority needs; dependence on provincial and national remittances, lack of jurisdictional mandate in certain climate sensitive sectors and institutional bureaucracy. These challenges need to be addressed both prior and during the process of mainstreaming; national governments need to undertake priority actions to address these obstacles.

2.4.3 Building Implementation Capacity

The final and equally most important phase is to build capacity of both government and civil society so as to be able to continually play a role throughout the policy and

legislative frameworks leading up to implementation (Lebel et al, 2012). Country guidance for national level mainstreaming identifies four main areas of intervention that need to be strengthened in order for countries to be able to meet up with the implementation challenge:

- Adaptation Monitoring and evaluation (M&E) Framework;
- Budgeting and financing;
- Cross-sectoral collaboration;
- Institutional and Capacity building.

These four areas speak to the very need to develop flexible institutions which are amply adaptable to the uncertainties of climate change and have both the scientific and administrative capacity to deal with the challenge.

2.4.3.1 Adaptation Monitoring and evaluation Framework

A national Monitoring and Evaluation framework must be developed and effectively implemented. This speaks to the design of national and sector indicators for set climate change mainstreaming targets and ensuring the necessary capacity is developed and harnessed in the relevant institutions (World Bank, 2010). It also entails sharpening the capabilities of government, private and civil society to collect and manage climatic data and impacts. The data collected will then need to be analysed and packaged in way that policy and development planners can use because progress towards the attainment of policy interventions can only best be measured and reported when there is baseline data and when emerging trends and issues are captured, analysed and reported (OECD, 2009).

2.4.3.2 Budgeting and financing for Climate change adaptation

Every country needs to develop climate sensitive budgeting processes that take into consideration and appreciate the cost of maladaptation and ensures that current

allocations are used to avoid future costs while maximizing the net benefits of adaptation (Smith et al, 2006; World Bank, 2010). This involves the engagement of relevant budgeting bodies during the formulation of annual budgets and MTEFs in order to guarantee that adaptation measures are funded and government bodies such as Finance ministries have institutionalized the appreciation of the need to adapt. This also calls for the establishment of adaptation specific funding mechanism as well as the piggybacking on existing sectoral funding vehicles that integrate climate change consideration (UNDP-UNEP, 2011). For the sake of long term sustainability there is need to develop capacity for local resource mobilization so that adaptation needs can be funded organically to lessen dependence of both multilateral and bilateral funding platforms.

2.4.3.3 Cross-sectoral collaboration

Climate change by default is a cross-sectoral issue and should therefore be approached in a synergistic and coordinated way, across all sectors and spheres of government (UNDP-UNEP, 2011). Ensuring that there is effective structural integration at all levels to facilitate the pooling of resources and optimal allocation of rather scarce resources and assets. Sector agencies with jurisdictional overlaps need to adopt integrated approaches in dealing with issues of common interest and should be able in the process to harness the required resources such as human capital, knowledge and technological transfers and funding. This calls for the cross-pollination and flexibility of legislative and policy frameworks to ensure that comparative advantages are harnessed and systemic weaknesses fortified. Adjustments will therefore need to be made to the existing regulatory and policy regimes to make them more enabling and smooth out usual institutional bottlenecks.

2.4.3.4 Institutional and Capacity building

In order to achieve the mainstreaming goals both government and other stakeholder institutions will need to develop the necessary technical capacity composite of both mainstream development approaches and climate change considerations. Relevant

institutions will need to have the analytical capacity to conduct sector vulnerability and risk assessment, identify entry points and mainstream climate change risks and vulnerabilities into mainstream development planning, budgeting, implementation and performance management (World Bank, 2010, UNDP-UNEP, 2011). A deliberate and comprehensive capacity building strategy will need to be developed and adapted to the specific needs of respective government actors and other stakeholders (Lebel et al, 2012). The strategy should focus on developing individual capacity of available human resources, Institutionalizing Flexibility; entrenching the culture of synergistic cross-sectoral corporation, decentralization of sectoral actors to local levels and ensuring a streamlined fiscal policy that prioritizes adequate and sustained budgetary allocations for climate change (World Bank, 2010, UNDP-UNEP, 2011; Smith et al, 2006).

2.5 SOUTH AFRICA'S RESPONSE

South Africa's response to this Global crisis, at the policy and legislative levels, has thus far has been commendable in the context of international recommendations highlighted above by the OECD, World Bank and UNFCCC. However, the actual implementation of policy imperatives has not been without flaws and omissions. Since the publication of its Initial National Communication under the UNFCCC on 11th December 2003, a string of key stakeholder engagements characterized by national conferences and commissioned studies has informed South Africa's Climate Change policy pathway. This evolutionary process culminated in the release of the National Climate Change Response White Paper (NCCRP) in 2011 and rolling out of a number of Climate Change mainstreaming toolkits as well as Monitoring and evaluation, reporting and verification initiatives at the sub-national levels as captured in Boyd (2012). This section briefly outlines the major milestones in the country's policy development process with the aim of highlighting lack of on-the-ground implementation of adaption mainstreaming into development plans is more of a policy

implementation failure and not a policy formulation one. Most of the information in this section is derived from the second and Third National communication documents published for comment in 2011 and 2017 respectively.

2.5.1 The 2005 'Climate Action Now!' conference

While the release of the National Climate Change Response strategy (NCCRS) in September of 2004 was the national Government's initial attempt at providing strategic direction and leadership to all climate change responses nationwide (DEA,2011), it was not part of the beginning of the official development of a national policy response process. That accolade goes to the October 2005 "Climate Action Now" Conference that was held in Midrand, Johannesburg (DEAT, 2005a).

In her key note address, the then Deputy President, Phumzile Mlambo-Ngcuka, affirmed the country's commitment to addressing climate change and how it galvanize all relevant sectors to meet the challenge. She highlighted that the approach would be to align the climate efforts with government's strategy for accelerated and equitable growth and sustainable job creation and poverty alleviation (DEA, 2011)

This conference was widely hailed as a sign of Governments resolve and commitment to the development of a National climate policy with over 600 delegates from Government, Business, Trade Unions, Civil society, Academic and scientific communities in attendance it was the first known gathering of this magnitude organized by the executive in south Africa. The conference was a resounding success in that it positioned Climate change as an important pillar of South Africa's development agenda and galvanized the commitment of all relevant stakeholders in the country around a common sense of purpose and direction. The outcomes of the conference were a set of 24 activities captured in a Government's Statement of intent known as the '2005 Midrand Plan of Action'. These actions points can best be summarised in the following six categories:

- The establishment and strengthening of an institutional framework comprised of Inter-ministerial committees at all spheres of Government; government agencies both scientific and policy oriented and platforms for engaging both private and civil society stakeholders;
- Initiation of a participatory National Climate Change policy formulation process;
- Initiation of a comprehensive national climate change research strategy that would support and finance studies in all facets of Climate change nationwide including scenario building for GHG emission stabilization;
- Exploration into ways of funding Climate Change interventions in an easily accessible and sustainable manner;
- Increasing investment into renewable energy sources as a way of reducing GHG emissions and improving the access to affordable energy by the majority of poor south Africans; and
- Initiating and strengthening the South Africa's technological transfer agenda in areas of green technologies and weather observation.

While the need to address the adaptation side of climate change was noted at this conference, it was quickly overshadowed by mitigation responses when it came to the actual implementation of conference resolutions.

2.5.2 The Long-Term Mitigation Scenario (LTMS) process

Inspired by the "2005 Plan of Action", In March of 2006, cabinet approved the LTMS process with the aim of establishing workable GHG emission pathways for the country and on how best the country would meet its emission commitments to international treaties. The LTMS were also designated to inform the country's development of a climate change policy in the long-term. The results of the LTMS processes were submitted and signed off by November 2007 and were widely accepted as having been based on the best science and data available at the time.

While a limited vulnerability and climate change impact assessment was undertaken under the LTMS, it is prudent to note that the country's reaction to climate change at this stage had been predominantly mitigation oriented while the adaptation focus remained relatively undeveloped. Government's first foot forward was skewed towards meeting its obligations to the Kyoto protocol of reducing emission levels by 2025; an oversight that would later be corrected in the 2008 policy direction.

2.5.3 Government's 2008 policy directions

Spurred on by the results of the 2005 summit and the results of the LTMS process, in July 2008, Cabinet and government launched the National climate change policy development process and associated implementation frameworks. Cabinet went on to provide six main focal areas upon which the policy formulation process would be based on, namely:

- Theme 1: Greenhouse gas emission reductions and limits
- Theme 2: Build on, strengthen, and/or scale-up current initiatives
- Theme 3: Implementing the 'business unusual' call-for-action
- Theme 4: Preparing for the future
- Theme 5: Vulnerability and adaptation
- Theme 6: Alignment, co-ordination, and co-operation (DEAT, 2011).

The last three themes as listed above are of primary importance to this study particularly Theme 5 on vulnerability and adaptation which focused on the need to assess the country's vulnerability to climate change and its adaptive capacity. This theme signalled a shift towards climate change adaptation from what had predominantly been a skewed response towards mitigation. Furthermore, Cabinet had also realized, under theme 6, the need to mainstream the science of climate change and its envisaged impacts into government systems and structures as a way of creating an institutional framework tailored and adequately equipped to address this

challenge. Government realized that in order to achieve this, and as part of good governance, there was need for a legal and policy framework to govern this mainstreaming process and also inform the stakeholder engagement practice of Government agencies with private and civil society sectors.

2.5.4 The 2009 Climate Change Summit and the 2010 Policy Round table

Consequent of previous engagement, over 900 delegates from all sectors in the country met, from 3rd to 6th of March 2009, in Midrand to commence a consultative process aimed at developing the country's National Climate Change Response Policy (NCCRP) (DEA, 2011). This summit entrenched most of the aspects identified in the 2005 summit but went a little further in the following sections:

- Balancing out adaptation and mitigation responses, and integrating adaptation into development planning
- Building climate resilience at a local level, including prioritization of energy access for the poor
- Advancing gender mainstreaming as a critical dimension of poverty eradication, sustainable development, and adaptation to climate change.
- The need for enhanced government co-ordination and policy alignment

In addition, as a follow up to this summit and as part of the feedback process in the development of the NCCRP on 17th May 2010, Government convened a round table discussion. During this roundtable the need for a national policy was reconfirmed and a submission date for a final draft to cabinet was set for end of 2010.

2.5.5 The 2009 Local Government Indaba

In 2009 the Department of Environmental Affairs, organized and hosted the 2009 Local Government Support Indaba, which was done in collaboration with the Department of Cooperative Government and Traditional and South African Local Government

Association, supported by Provincial Departments of Environment (DEA, 2014). The Indaba was one of the first real attempt by National Government to align and integrate the different environmental management responsibilities of the three categories of municipalities (Category A: Metropolitan, Category B: Local municipalities and Category C: District Municipality). It was an intervention born out of the realization that it is imperative to ensure that these diverse responsibilities are implemented in the most integrated manner and in line with the constitution, environmental legislations, provincial and national priorities as well as programmes (DEA, 2014). This indaba also gave birth to the various Local Government support programmes of the national DEA, the national Department of Cooperative Governance (DCOG) and the South African Local Government Association (SALGA) including that of South African National Biodiversity Institute (SANBI), in 2012, DEA, as part of its Local Government Support Programme and in response to the National Climate Change Response White paper of 2011, published the “Let’s Respond tool kit”. The Tool kit was aimed to serve as a guide to local government officials on how to integrate climate change into IDPs. To date the Tool Kit is the only real technical attempt by government to mainstream Climate Change into IDPs.

2.5.6 A sound Policy Framework established: NCCRP, NDP and LTAS

In 2011, the National Climate Change Response Policy (NCCRP) was announced by Minister Edna Molewa, and it embraces a two-prong approach, tackling both Climate change mitigation and Adaptation simultaneously. In her speech the minister highlighted the fact that “South Africa will firstly manage the unavoidable impacts of climate change by way of interventions that “build and sustain South Africa's social, economic and environmental resilience and emergency response capacity”¹. Then secondly the country will endeavour to honour its international obligations by contributing to the global efforts aimed at reducing emissions (Molewa, 2011)”. In line

¹ Press Briefing, Minister Edna Molewa. Accessed on March 2013 at <http://www.southafrica.info/about/sustainable/climate/191011.htm#.UVBRlqUznFI#ixzz2OYfaEr00>

with these policy objectives, South Africa remains a signatory to many international environmental conventions including the UNFCCC's Kyoto protocol and has since pledged to cut greenhouse gas emissions by 34% and 42% by 2020 and 2025 respectively.

This long-term policy approach was further reinforced by the National Development Plan (NDP) also released in 2011; Chapter 5 of the NDP outlines South Africa's transitional path to a low carbon economy through its Vision 2030 aimed at building a competitive, resource efficient and inclusive future (NPC, 2011). To achieve this the plan also emphasizes a two-prong policy trajectory that South Africa has to take; Firstly, to adapt to climate change impacts by way of strengthening the nation's resilience in the environmental, economic and social sectors as well as its disaster preparedness capacity; and secondly to Mitigate the effects of global warming by way of emission reduction without hindering the country's pursuit of its socioeconomic objectives (NPC, 2011).

Furthermore, In June 2013 the Department of Environment affairs completed a Long-term Adaptation Scenarios Flagship research programme (LTAS) in response to the NCCRP, para 8.8. This involved the development of adaptation scenarios at all spheres taking into considerations all possible climate conditions and development pathways in future (DEA,2013). The aim of this study like the LTMS is to provide national and sub-national policy makers and street level bureaucrats alike, with plausible projections of future climate change impacts for key sectors and estimations of their possible socio-economic implications vis-à-vis each sector's development strategy (DEA, 2013).

In 2016, DEA begun a process of particular importance in addressing adaptation needs in the country, this process is the development of the National Adaptation Strategy (NAS). The final NAS is expected to be finalized and ready for gazetting by

end of 2018. The NAS will prioritize adaptation needs of the country and will be used as the National Adaptation Plan (NAP) to the UNFCCC (DEA, 2017). During the development of the NAS, a set of climate change adaptation and resilience priorities were identified under important economic sectors with the highest vulnerability. The process also involved the review of climate change impacts, vulnerability and adaptation interventions at all spheres of government, namely national, provinces, district local government and cities. Moreover, in order to ensure that there was consensus of identified gaps, barriers and priorities the process involved extensive stakeholder engagement, in order to ensure that the strategy is representative of a diversity of views.

Despite all the significant steps toward addressing climate change adaptation undertaken by South Africa since the inception of the NCCRP, the country has acknowledged that these institutional, research and financial gaps exist and the aspirational goals for adaptation as outlined in the NDP and subsequently in its Nationally Determined Contributions (NDCs) will be a key to effectively addressing these barriers (DEA, 2017). As such, when the country developed its INDC in 2015 in preparation for COP21 in Paris, the timelines provided are congruent with those in the NDP which take cognizance of the fact that the current set of adaptation goals would be attained from 2020 onwards:

The NDP with respect to climate change (RSA, 2011a) specifically states that by the year 2020 annual data on climate impacts should feed into the assessment, reporting, policy and regulatory process and that by this time plans to strengthen the states capacity would start to pay off, with rigorous skills development interventions active across the country. It is further envisaged in the NDP that by 2020 that resilience planning would be incorporated into all planning procedures in the country. The NDP further proposes that by the period of 2025-2030 the investments in climate resilient infrastructure made in the previous decade would start to bear fruit and that South Africa would be well capacitated to comfortably manage its policy, regulatory and

support functions, and report to the national and international arenas as appropriate(DEA, 2017)

This is indicative of the fact, and it is prudent to deduce that, South Africa's Adaptation preparedness is in transition and hence not fully integrated across all sectors and Government spheres. It is however also important to also note that various sector and government adaptation responses are at different stages of development with some being more advanced than others. For instance, while most Metro Municipalities have well developed adaptation strategies in place most local and particularly rural municipalities have neither a drafted adaptation strategy nor the capacity to implement it.

2.6 TAKING ADAPTATION TO THE LOCAL LEVELS

This section will attempt to establish whether the advent of the mandate to plan for Climate Change at the local levels as highlighted above is gaining traction among municipalities nationwide or is it just another added burden to the already long list of struggles that this sphere of government is facing in as far as policy implementation is concerned. The section will attempt to answer the following questions or rather propositions; is the top down policy implementation model currently in place in South Africa the reason for this lag? On the other hand, could there be a clash of interest with the expectations of policy makers on one hand and the pressing socio-economic demands placed on the local administrators on the other? Is the fact that policy implementation is top-down and the IDP process bottom-up causing this conflict of interest? Taking the argument further into the public administration arena particularly intergovernmental relations could there be other variables causing this lag? For instance, have most municipalities fully grasped the climate change policy requirements placed on them by other spheres of government and the urgent need for them to integrate these concerns into their work. What's the magnitude of the problem of scarcity of skills to effectively plan and manage the effects of a changing climate

change and is there sufficient institutional leverage and arrangements, from national to local, designed to facilitate the integration of adaptation practice across all municipal line departments. Is the lack of sufficient fiscal allocations from municipal budgets and other spheres of government for climate change integration another hurdle? In short, to what set of factors, in as far as policy implementation and intergovernmental relations are concerned, can we attribute this lack of urgency in mainstreaming climate change into municipal plans.

It is only prudent, however, at this stage to pause and acknowledge that the government has ticked all the boxes in as far as policy formulation is concerned. A Comprehensive and widely accepted policy and planning framework for climate change adaptation now exists in the country supported by verified scientific data and models to worldclass standards. With reference to figure 3 South Africa has done very well in the first phase which is the national assessment stage “understanding the sustainable development-Adaptation Linkage”. In recent years there has been great advances in the climate research capacity of the country in areas of modelling and risks and vulnerability assessment. These advances are characterized by a sophisticated earth system science research program on the biophysical impacts of a changing climate on key areas of the economy such as water, agriculture, and biodiversity (Zierwogel et al, 2014). What remains unanswered however is how best to implement this new regime of policy considerations within the current institutional framework. According to Zierwogel et al (2014) the government’s development of the NCCRP has not yet resulted into the universal mainstreaming of adaptation into both long term and year to year operational planning throughout government. The challenge faced by the South African government is how to move from the assessment phase to the other two stages namely 1) mainstreaming adaptation into policy processes at both sector and sub-national levels and 2) actually meeting the implementation challenge at the local levels.

2.6.1 Why the local levels and IDP?

Notably one thing is akin to both the white paper and the NDP and that is how these objectives are to be achieved; both documents require ensuring that all levels of government embrace climate change mitigation and adaptation by formulating and implementing effective policies and interventions. Section 10.2.6 of the NCCRP provides a policy directive for all local Governments to mainstream Climate Change considerations into their respective IDPs and all other service delivery programmes. While in 10.6 a proviso is provided for all Government departments, both national and provincial, and state agencies to incorporate climate considerations into their decision making tools; the white paper further acknowledges that local governments are better positioned and that they have so far been effective in implementing climate change adaptation actions (DEA, 2011).

What this does is that it positions the three independent spheres of government and their related interactions at the centre of climate change policy implementation. Both documents do however emphasize the utmost importance of local government in achieving policy implementation success because in essence, global warming is more a local occurrence than it is a global or national one, since most of the effects are most felt at the local area levels (Pasquini, Cowling & Ziervogel, 2013, Cullis et al, 2011, Naess, Bang, Eriksen, & Vevatne, 2005). According to the OECD (2009), there are three main reasons why mainstreaming should be done at the local level, first, the shocks are most felt locally, such as the disruption of local livelihood strategies. Secondly, locally prevailing conditions shape vulnerability and communities' adaptive capacity. Thirdly, the outcomes of adaptation interventions are in most cases best observed locally. Therefore, since climate change is more a local issue than it is global or national one, there is need to dovetail all efforts aimed at combating it locally. Municipalities therefore are uniquely positioned to address risks and vulnerabilities on one hand and opportunities on the other end of the spectrum (CDKN, 2012).

With Local government increasingly being the confluence of all government department programmes (DPLG, 1998) municipalities are strategically positioned for greater impact in mitigating the impacts because they are closest to the constituents and point of impact (Meashan et al, 2011). Consequently, in this country, like any other part of the world, local authorities are the best suited sphere of government (CDKN, 2012; DEA, 2011).

The IDP is the foremost planning mechanism made available to local governments by law in South Africa (CDKN, 2012). The Municipal Systems Act 32 of 2000 (LGSA) compels all local government entities in the country to have an IDP: the planning cycle is over a five-year period and provides strategic guidance on the development trajectory of a town, district or metro (DEA-DPLG, 2012). It's the blueprint for the local development agenda and disaster management goals and informs all departmental operational targets and key performance areas. On the other hand, the IDP is a political document, ideally it is the incumbent political party's statement of intent to its constituent; a yardstick against which the voting public can measure the performance of its local government. Since it's basically a collation and optimization of the constituents' wish list it's principally meant to enhance people's quality of lives of people in the municipality; developed in a participatory manner it is a reflection of the people's prioritized and urgent needs. All municipal department plans and programmes feed into the IDP objectives and in turn the IDP is aligned to provincial and national development objectives. It is this cascading synergy in policy and statutory terms from top to bottom and vice-versa that makes the IDP a central service delivery vehicle for all other government departments working in the vicinity, including the climate change agenda.

2.6.2 Situational analysis of adaptation mainstreaming at IDP level

The case, however, remains that South Africa is still far from universally attaining the mainstreaming goals set out in the White paper at all levels of government (CDKN,

2012). Despite numerous references, to the need to climate proof the current development trajectory in official government documents, implementation remains a challenge. On the other hand, While there is some good work that has been done across all spheres of government that is exemplary these endeavours are in most part fragmented and lacking in scale (WCG, 2013). A rapid review of most municipal IDPs and their Service Delivery and Budget Implementation Plans (SDBIP) reveal a glaring lack of integration of climate change considerations across departments at the programme and project levels (Pasquini et al, 2013). Meanwhile, in 2011, the Department of Environmental Affairs gave an ultimatum to all spheres of government and state-owned enterprises to ensure that all their decision making instruments are fully aligned with the NCCRP by October 2013 (CDKN, 2012). This milestone unfortunately has proven too ambitious, needless to say it has not been attained in all institutions and development continues to be pursued in parallel to environmental management let alone climate change considerations. The national development plan, while highlighting the importance of integration it rightly concedes that this is far from being achieved and that more focus has thus far been placed on mitigation than adaptation (NPC, 2012). Consequently, the need at this stage to assess the progress made in integration of Climate risks into the local governments' development programmes and probably take stock of the outcomes achieved as a result of infusing such considerations at both policy or programme and project levels. More importantly there is need to highlight the factors impeding the mainstreaming of Climate Change into IDPs as a way of establishing why majority of municipalities have not yet fully complied with the policy directive and also assess the level of compliance among municipalities with the tenets of the White Paper on Climate Change which as Boyd (2012) puts it; The overall approach of the NCCRP is to be "integrated and aligned" (DEA 2011:14) as well as prioritize "integrated planning" (DEA 2011:15)

Meanwhile, Adaptation literature on South Africa indicate that adaptation has stalled at the municipal level due to the following reasons:

2.6.2.1. Lack of Capacity

It is an established fact that municipalities in the country will experience the effects of a changing climate differently from each other due to the differences in micro-climates and other socio-economic factors such as population density, level of service delivery sensitivities and poverty levels. In the same light the level of responses will differ from one municipality to another because there will be differences in the level of readiness or rather their capacity to adapt (Turpie & Visser, 2013). By end of 2012 only two municipalities countrywide had fully mainstreamed Climate Change Adaptation considerations into their IDPs and had the capacity to collect data independently (CDKN, 2012, Boyd, 2012). The question remains what about the remaining 276 municipalities countrywide, comprised of 4 metros, 44 districts and 228 local municipalities. How much of this thinking has actually trickled down to the local government levels where development actually takes place? Adaptation literature is unanimous on the issue of lack of capacity; there is a general lack of adequate technical capacity to deal with climate change let alone its integration into all department planning and policies. This lack of capacity extends beyond municipal staff's inability to execute their immediate functions and includes their inability to draft technically sound work specifications for contractors that clearly stipulate the scope of work (Celliers L, Colenbrander DR, Breetzke T, Oelofse G., 2015; Measham et al., 2011; Mukheibir & Ziervogel, 2007; Ziervogel et al., 2010, Zierwogel et al, 2014; Turpie & Visser, 2013). This lack of capacity is also often expressed as a shortage of warm bodies (staff shortages) (Celliers et al, 2015) as most municipalities are unable to attract the right calibre of staff particularly smaller and rural municipalities. As better qualified and experienced personnel prefer to stay and work in larger cities as opposed to rural or peri-urban areas due to the higher standards of living and remuneration in the metropolis.

2.6.2.2. Lack of Cross-sectoral co-operation

This is a lack of synergy and coordination at all levels of government and going beyond

inter-ministerial/Intersectoral steering committees but being reflected in strategic and operation documents with proper performance management and financing systems as a tool for accountability. The 'silo' mentality that characterises how government does work is a historical legacy and the main cause of the current state of institutional fragmentation (Pasquini et al, 2013). According to Celliers et al (2015) the current institutional structures at most municipalities are mainly borne out of political motive, while sector departments are arranged for governance expedience rather than optimized for service delivery and productivity. On the contrary, Climate change by design necessitates corporation across functions or structures so as to optimize scarce resources and improve effectiveness of service delivery. Celliers et al (2015) posits that the existing municipal I structures are not integrated across functions; therefore, there is need to revisit and rethink our current institutional arrangements Vis-à-vis achieving mainstreaming goals and for general integrated planning. The other reason for lack of collaboration, besides institutional challenges, is knowledge gaps in vulnerability data and in quantifying the socio-economic cost of climate action or inaction (Zierwogel et al, 2014). The absence of such data makes it difficult for planners and policy makers to identify areas of synergy and how best to align institutional resources. Consequently, in many municipalities, Climate change adaptation like integrated Coastal Management (ICM), is a function that is predominantly done in silos by respective departments, as oppose to a shared inter-departmental, vision and objectives (Celliers et al, 2015).

2.6.2.3. Lack of information on Climate change impacts and measures

A plethora of adaptation literature in recent years allude to the fact that municipalities have poor data management capabilities and therefore lack access to reliable, information on hazards and potential responses (e.g. Measham et al., 2011; Mukheibir & Ziervogel, 2007; Ziervogel et al., 2010). Generally, there is no systematic attention paid to the collection, processing and use of climate data for decision making for developing response measures to identified impacts. This is partly due to the fact that

climate change is still predominantly regarded as an environmental issue (Baker, Peterson, Brown, & McAlpine, 2012; Measham et al., 2011; Ziervogel & Parnell, 2012), and all its functions, including collection of impact data is assigned to the environment department or position and hence neglected by other sector departments.

To some extent, this can be blamed on the lack of municipal-wide inter-departmental monitoring and evaluation frameworks for climate change. Climate change adaptation in most municipalities countrywide is a function in transition and at different stages of evolution with both intra and inter-departmental disparities with non-existent to highly fragmented M&E systems. Currently South Africa lacks a nationally coordinated M&E system as spelt out by the NCCRP, as it is yet to be finalized; way beyond its October 2013 deadline (Boyd, 2012). Consequently, with a lack of national statutory and policy guidance most sub-national governments lack climate change adaptation M&E systems that spell out the data management roles and responsibility of sector departments at the local levels. This is further compounded by the disparities in technical and institutional capacity, to develop and manage such systems, from larger metropolitans to smaller local municipalities (Ziervogel et al., 2014; Boyd, 2012).

2.6.2.4. Lack of integrated planning and resource allocation

This is probably the biggest challenge facing Climate change in general in the country; the lack of budget and planning alignment from national to local. The equitable share allocation system in the country has not factored in climate change as an independent line of funding but in batched together with other socio-economic needs which, during resources allocation at the local levels, are prioritized in place of climate change (WCG, 2014). Besides the Adaptation fund established by government under the auspice of the National Biodiversity institute, there isn't any other adaptation funding mechanism both at national and sector levels (Ziervogel et al., 2014). Neither do other existing government sector grants reflect any climate change considerations at the

point of implementation nor is this slowing down efforts in establishing long-term sustainability of Adaptation efforts. Climate change is currently an unfunded mandate in South Africa because while climate change responsibilities have been delegated to municipalities no budget has been provided by national treasury (Pasquini et al, 2013). Inadequate funding has been flagged in many adaptation literature as a major restricting factor: since municipalities usually don't have money for climate action (Measham et al., 2011; Ziervogel & Parnell, 2012), and it's mostly due to the numerous and often competing responsibilities that municipalities have. This is further compounded by the fact that South Africa does not have an integrated climate financing mechanism and the financing landscape is characterized by limited knowledge, among municipalities, of what funds they can access and for those that are known the terms and procedures are often onerous with marginal benefits (WCG, 2014). As a result of the lack of integrated financing framework municipalities often have to use different funding sources for each project phase because the different funding platforms are only tailored to finance particular aspects. The application for such funding is done with no guarantees of success, thus threatening the very continuity and sustainability of Climate change interventions. This lack of reliable funding also serves as an inhibitor to the up-scaling and replication of Climate change adaptation interventions at the sub-national levels (WCG, 2014).

2.6.2.5. Organizational Culture impediments

In 2013, the western Cape Government supported by the Technical Assistance Unit (TAU) of the National Treasury published a diagnostic report on the "Barriers and Challenges to implementing Climate Change adaptation projects" focusing on the sub-national levels. Using the six-ball model to analyse municipalities along, Legislative, process, institutional culture, systems and information, organizational and Human resources barriers the findings were indicative of a dysfunctional mainstreaming process. Of particular interest was this study's focus on institutional culture; this study highlights the following resultant cultural ills as an impediment to climate change

mainstreaming.

2.6.2.5.1. Risk Averse Management Approach

It has become a norm now for Senior management staff in local government to adopted less ambitious and risk averse interpretation of legislation; this serves true for most Chief Financial Officers (CFOs). This institutional culture is mainly attributed to the differences in the interpretation of the onerous suite of municipal legislation that officials now have to contend with. Coupled with recent stringent oversight by the Recent developments in the legislative space that has given the Auditor General's Office and National Treasury more powers to prosecute has increased the likelihood of municipal management staff facing litigation. This has resulted in senior management staff taking less risky decision to safe guard their jobs hence crippling ambition and innovation in most municipalities. Senior staff now avoid any undertaking that will require extra effort in persuading councillors for approvals, or possibly exposing them to possible criminal prosecution on grounds of wasteful and fruitless expenditure (WCG, 2013). Councillors, on the other hand are equally risk averse with a fear of losing electoral support. Consequently, there is insufficient risk appetite among decision makers and this is increasingly going to be the norm in future if the current legislative and political environment is anything to go by. Meanwhile, Climate action requires taking long-term risks in terms of resource allocation (both human and monetary) and institutional realignment.

2.6.2.5.2. Short-Termism

The study revealed the existence of a short-term culture in provincial and municipal governments. This is characterized by an inclination towards strict compliance with the annual expenditures requirements of the Public Finance Management Act of 1999 (PFMA) and the Municipal Finance Management Act of 2003 (MFMA) when it comes to planning of programmes and projects. This practice discourages the financing of long-term visionary programmes but instead is reactive in nature; Characterised by

unplanned responses to emergent service delivery needs; it's also known as fiscal dumping. This work ethos is usually accompanied by risk averse behaviour, where municipal officials are unwilling to embark on processes that will require them to comply with the requisites of the PFMA and MFMA (WCG, 2013). Climate change mainstreaming requires visionary and strategic leadership, on the part of both municipal management and councillors, in order to achieve integration goals and arrest the current trend of underinvestment in climate change adaptation measures.

2.6.2.5.3. Conflict of interests

The main underlying issue and what goes without mention is the fact that local government is a highly politicised sphere of government; more so than provincial and national due to its proximity to the constituents. Consequently most, if not all, technical prudence and best practice considerations when it comes to making decisions are often subservient to political or electoral expedience. Street level bureaucrats are forced to walk a tight rope between compliance to national statutory instruments and the electoral needs of their immediate political masters. These ethical dilemmas thrust at officials are a source of tension and acrimony between politicians and technocrats. While working under pressure from either their constituents, demanding services, or from their political parties, needing to score brownie points for votes; councillors exert enormous amounts of pressure on officials to authorize applications or programmes without following due processes (WCG, 2013). In interviews conducted during this study councillors were reported to be in a tendency to direct management decisions and victimize municipal officials who oppose such directives. The criminalization of financial mismanagement by the PFMA and MFMA, from a political context, renders municipal officials vulnerable in that they have increasingly become victims of politically sanctioned witch-hunts where officials are charged with mismanagement and placed on suspension or dismissed all together. This creates a culture of latent fear and subservience among officials towards the political machinery in their attempts to protect their careers and retain their jobs. This tension creates an

environment of mistrust and strict statutory compliance, on the part of the officials, thus stifling innovation and creativity.

2.7 UNDERSTANDING CAUSES OF PUBLIC POLICY IMPLEMENTATION FAILURE IN AN ATTEMPT TO EXPLAIN SOUTH AFRICA'S ADAPTATION POLICY LAG

Policy scholars, Van Metre and Van Horn (1975), define policy Implementation as ***“Encompasses those actions by public and private individuals (groups) that are directed at the achievement of objectives set forth in prior policy decision”***

One of the most detailed and probably complex definition (in terms of the extent of variables) is one offered by Mazmanian and Sabatier (1983, 20-21):

Implementation is the carrying out of a basic policy decision, usually incorporated in a statute but which can also take the form of important executive orders or court decisions. Ideally, that decision identifies the problem(s) to be addressed, stipulates the objective(s) to be pursued, and, in a variety of ways, "structures" the implementation process. The process normally runs through a number of stages beginning with passage of the basic statute, followed by the policy outputs (decisions) of the implementing agencies, the compliance of target groups with those decisions, the actual impacts of agency decisions, and, finally, important revisions (or attempted revisions) in the basic statute.

What Mazmanian and Sabatier's definition does is that it brings to the fore the consideration of different Variables or rather elements essential for the success of policy implementation emphasizing their individual importance but also in connection to other variables as part of an intricate and interactive process.

Van Metre and Van Horn (1975) posits that the policy implementation phase does not

commence until an institutional framework within which to undertake the implementation has been identified; legislation has been passed, and funds allocated towards the accomplishment of the set policy goals and objectives. In other words, the proponent of the “policy” in this case the government should ensure that the bureaucratic systems in terms of operational policies and structural arrangements in terms of intergovernmental relations are in place. From a fiscal perspective, budgetary allocations should be secured and funds made available to the identified agencies in charge of implementing relevant policy segments and in cases where the collaboration of civil society and private sector is required, information on how to access the available resources should be clearly and amply communicated to all stakeholders. Some other policy implementation scholars, and in relation to policies whose goal is behavioural change, have highlighted the importance of drafting and implementation of statutory tools to ensure the enforcement of the policy tenets. DeLeon and DeLeon (2002) further identify the cardinal role played by politicians and the policy target group (in this case often the public); the point they make is that, effective policy execution only occurs when the policy target group is given room to meaningfully participate throughout the process. The buy-in and active participation of the policy constituent is vital in that it is their challenges and expectations that are the focus of any policy and moreover the success of most public policies is measured by the difference it yields in their lives. Politicians on the hand are a vital variable in the implementation process in that they exercise a weighty hegemony on the administrative processes of government and this is because in most cases the failure or success of policies does have a corresponding impact on their electoral fortunes.

Then there is also the issue of who drives the whole policy implementation process and what is the policy proponent’s position in the institutional hierarchy of the government. Policy Implementation can either be “Top-down” [Mazmanian and Sabatier (1983), Nakamura and Smallwood (1980), Berman (1980)] or “Bottom-up” [Lipsky (1971 and 1980); Hjern (1982); Hjern and Hull 1983)]. In the former, policy

implementation cascades from the top echelons in government to the lower levels and its command and control oriented. While the latter purports a more participatory driven process from street-level bureaucrats and target communities upwards, characterized by consensus building and collective management of the process. A third model is suggested by another group of implementation scholars such as, Matland (1995), Ingram (1990), and Scheberle (1997) known as the contingency theory, that instead of having one size fits all approaches, the appropriate approach for any given policy is very much contextual and should be decided upon based on the contingencies surrounding the policy issues at hand. In practice however, either one of the two earlier models take precedence, and quite seldom a combination of both., In the case of South Africa, Robino (2009) argues that though the provincial and local governments command a fair deal of administrative, political and fiscal autonomy, policy formulation and implementation mandate remain a national function, hence its top-down.

Deleon and DeLeon (2002) also submitted the need for clarity in the policy objectives and that they should be realistic and achievable. In order to ensure success, Policy formulation should take into consideration the contextual elements present in the implementation realm such as bureaucratic processes and systems, institutional capacity and prevailing socio-economic trends in the country. In South Africa however, the problem is not with the lack of policy clarity but one of interpretation during implementation in context of the operational policies at the other spheres of Government (Brauns and Wallis, 2014, WCG, 2011). Therefore, both unrealistic policy objectives and misaligned interpretation should be avoided and where they occur policy review systems should be in place to ameliorate the adverse impacts.

The rationale in principle is that a favourable mix of all the above-mentioned variables should ensure the achievement of set policy objectives while the opposite is also true for policy failure. However, in practice, the success or failure of Policies is very much dependent on the net effect of the complex interaction of all the variables and there is

no telling with certainty whether the policy will succeed or fail until the impacts are verified and appropriate revisions are made to the policy framework.

2.7.1. Understanding the policy implementation lag

According to Brauns and Wallis (2014), South Africa can boast of some of the world's best policies but government struggles with their implementation. Lyman (2006) also alludes to the fact that there is clearly a problem of failure to translate well-intended policies into practice in South Africa across most government departments. This lag in attaining the policy goals has mainly been attributed to systematic and structural weaknesses in all three spheres of the government's institutional framework (Zierwogel et al, 2008; Faling et al 2012; Brauns et al, 2014). However, this study submits that there is need to broaden this perspective to include socially created institutional norms and cultural fabric that govern behaviour within these spheres which in essence might underpin these weaknesses. There is need to delve more into the relational aspects between actors such as the existence of hegemonies between national and local government; between administrators and politicians. In order to arrive at how and why policies fail or succeed there is need to understand the physiology of public organizations, since they are the infrastructure that supports policy implementation (Conteh, 2013). This section will therefore attempt to highlight why Adaptation Mainstreaming, as a policy directive in Section 10.2.6 of the NCCRP, is lagging; both from a policy implementation and institutional theory perspective.

In order to help explain these policy implementation gaps across public organizations in South Africa and particularly within the Climate change mainstreaming arena its prudent to employ analytical frameworks that will highlight the institutional flaws that underpin this holdup. Both Conteh (2013) and Cho et al (2005), admit that with the advent of decentralization and the transfer of key government functions to sub-national levels, policy implementation has become a highly contested power play characterized by a complex web of interactions among multiple actors at several levels with diverse

interests. Since Complexity itself is a collection of competing discourses each holding a part of the complete whole truth (Celliers, 2000) policy implementation as a complex phenomenon cannot be explained from one theoretical perspective. Consequently, elements from two literatures that are best positioned to explain policy implementation in multi-level environments are going to be employed, namely Policy implementation research and Organization theory particularly institutional theory (Cho et al, 2005 and Conteh, 2013).

Cho et al (2005), posit that the implementation of policies remains a prominent part of public administration despite the ideological and methodological squabbles among policy implementation researchers. Policy implementation theory has had a turbulent epistemological journey, spanning three generations, since its introduction in the early 70s by Pressman and Wildavsky (1973). This section, however is going to borrow research elements from recent literature on policy implementation theory loosely perceived as the “fourth” research generation (Paudel, 2009) since it best underlies the scope of this work. According to Conteh (2013), implementation research, in what could be perceived as the “Fourth generation”, is undergoing a theoretical makeover towards one that esteems collaborative action that transcends structural and functional boundaries. He adds that there is a conspicuous widening of perception of policy implementation from a literal to a Multi-dimensional approach involving many disciplines, levels and areas of focus that affect a wide variety of interested and affected parties. According to Schroeder (2001) policy management in general from formulation to implementation and evaluation are increasingly being regarded as a complex cross-interaction of organisations from the private, public and civil society sectors made up individuals with varying vested interests, none of which individually have sufficient clout to independently decide the plans and activities of other stakeholders. What this entails is that the achievement or failure of policy imperatives is not solely dependent on the integrity or coherence of intergovernmental corporation but also its interaction with its external environment or institutions (Conteh, 2013).

It is this understanding that bridges the conceptual gap between policy implementation theory and institutional theory relating to organizations; with its emphasis on isomorphic pressures whether it be coercive, normative and mimetic forces (DiMaggio and Powell, 1983). Institutional theory posits that institutionalized transformation, as is the case here with mainstreaming, occurs at the individual, institutional, and interorganizational levels (Oliver, 1997). At the interorganizational level, external stimuli from external players such as government, private sector alliances, and societal expectations have a strong influence on how organisations behave in conformity with commonly expected societal norms and standards (DiMaggio & Powell, 1983). At the organizational level, commonly established belief systems whether cultural, social or political tend to back the retention of the status quo. While at the individual level, the behaviour or actions of decision makers such as managers is informed by both consciously or subconsciously held individual belief systems (Berger & Luckmann, 1967). It is this interaction of a multiplicity of actors and isomorphic forces that characterize the execution of policies and the outcome of policy management is very much dependent on the net effect of these complex interactions.

2.7.2. Understanding Policy failure

The Climate Change Adaptation Mainstreaming directive in Section 10.2.6 of the NCCRP, is lagging, because of lack of synergy among stakeholders and compliance caused by a glaring lack of a supporting statutory framework that holds both politicians and administrators accountable. Institutional and organizational theory scholars (Meyer and Rowan, 1977; Kingston and Caballero, 2006; Frumkin et al, 2004) posits that Organizations can either conform or defy any policy directive depending on whichever one of the two actions will best further their survival or continued relevance in their institutional environment. Therefore, the extent to which actors at the three levels, identified above by Oliver (1997), conform with these isomorphic pressures is dependent on the level of perceived legitimacy to be attained or punishment to be avoided by conforming to the prescribed change (Ashworth et al, 2005; Hafner-Burton

et al, 2008; Bromley & Powell, 2012). In essence it's this affinity for legitimacy that makes organizations conform since it secures their relevance to their institutional environment and ensures their long-term survival or continuity (Zucker, 1987). Risk averse management, as earlier alluded to can be attributed to this factor, where municipal management and political councillors adopt conservative interpretation of policy directives because it's not in their immediate career or political ambitions. The choice of a conservative position is informed by the need to minimally meet the requirements of any given policy directive, thus averting any possibility of retribution from national Government. Meanwhile providing less than the required amounts of resources to achieve the directive objective because it's not a major electoral issue for the politicians, hence not prioritized and maybe doing so, on the part of administrators, would expose them to possible audits or scrutiny for unfruitful expenditure (WCG, 2011). This has led to the development of a subtle yet very poignant culture of "*un-resourced compliance*" characterized by the development of glossy policy and strategic documents whose implementation never sees the light of day due to lack of political and administrative will.

2.7.2.1. Institutional Decoupling and Policy failure

Kingston and Caballero (2006) define institutions as the rules (norms and standards) of the game in a society, together with their enforcement arrangement while organizations are the players in the game. Therefore, the players (organizations) have to adapt how they function, both structurally and operationally, whenever rules change in order to survive or risk being redundant. It should be noted however, that organizations do not always fully conform to their institutional environments, so often an organisation's activities are found not to be in line with it declared practices (Meyer and Rowan, 1977). Institutional theory acknowledges the substantial latitude for divergent behaviour, in spite of isophormic pressures, by organizations; where they symbolically adopt widely accepted norms without changing how they actually function; a phenomenon commonly known as decoupling (Ashworth et al, 2005;

Hafner-Burton et al, 2008). Organizations are at times known to conform for the sake of legitimacy without certainty on the substantive impacts of such action (Ashworth et al, 2005). According to Frumkin et al (2004) institutions seldom adopt strategies, structures, and processes in order to enrich productivity, but as an alternative retort to and search for means of contain demands placed on them by regulation or external scrutiny. It's this "window dressing" that is of particular interest to public policy implementation as it partly helps explain the gap between rhetoric and action, Christensen et al (2007), speaking from a cultural perspective, mainly attribute this to the natural cultural impulse to maintain the status quo, for instance opposition to reform processes that threaten dominant informal norms and values developed over long periods of time. Other studies in institutional theory assert that decoupling may also be a result of the apathy against change aimed at retaining the status quo in power relations (Dobbin, 1994) The level of defiance exhibited in an organization is dependent on its degree of autonomy from its surrounding environment, organizations or actors with greater autonomy are free to exercise high levels of decoupling (Hafner-Burton et al, 2008). It's this "window dressing" that is of particular interest to public policy implementation as it partly helps explain the gap between rhetoric and action. Decoupling therefore, in all its variant causes and effects, is in essence the cause of policy failure and according to McConnell (2010), a policy fails "if it does not achieve the goals that proponents set out to achieve, and opposition is great and/or support is virtually non-existent.". Going by this definition the success of a policy is only pronounced when the achievement of the policy goals set out by its proponents, in this case the Government, does not threaten the interests and continuity of other stakeholders involved in its implementation.

Furthermore, both Wijen (2014) and Bromley and Powell (2012), assert that the concept of decoupling goes beyond the classical definition of being the chasm separating policy formulation from practice but also includes the notion of it being the gap between means and ends in organizations that are compliant.

At the very nexus of policy and practice, decoupling is a result of failure to implement rules or when they are habitually breached. In other instances it is a result of a failure to link policy actions to the desired result, instances where the implementation of policies does not yield the results that can be clearly linked to the policy actions (Bromley & Powell, 2012).

Policy-practice decoupling occurs when adopted policy goals or intentions are not implemented at all or are routinely violated while means-ends decoupling takes place when adopted policies are implemented but there is a misalignment between organizational activities and actual outcomes attained on the ground. According to Bromley and Powell (2012), it best to think of policy–practice decoupling as symbolic adoption, while means–ends decoupling as symbolic implementation.

A few examples can be cited from the South African perspective to highlight the prevalence of decoupling among municipalities in the country in as far as mainstreaming climate change is concerned. For instance, in 2011 during the COP17 all municipalities in South Africa ratified the Durban adaptation Charter, pledging to among other things incorporate climate change adaptation into their development plans. As of December 2012, only two had met the tenets of the charter. The question that begs asking is why did municipalities ratify this charter if they had no intent of meeting its requirements. Hafner-Burton et al (2008) posed a similar question when looking at why nation states with very negative human rights records have a tendency to ratify international human right treaties. The response to these questions lies in the very legitimating value derived from these treaties and because the cost or punishment for failure to meet their demands is very low to non-existent. Therefore, the ratifying of Durban Charter was more a ceremonial feat without either a will or capacity to comply and hence another classical example of window dressing meant to achieve the ratification goal set by politicians for the COP 17 event. In cases where some of the municipalities attempted to follow-up with their commitments but due to means-

ends decoupling the mainstreaming goals were not attained.

Furthermore, the current fiscal decentralization setup with its equitable share allocation system fails the climate change agenda in two ways, firstly the formulas used to allocate nationally raised revenue are not sufficiently prescriptive and do not place deliberate emphasis on sustainability let alone climate change. Secondly, In the current legal framework, that governs intergovernmental relations, neither national nor provincial governments have sufficient muscle to “force” municipalities to spend their grants on climate proofing and can only use moral suasion to achieve this objective. Municipalities can in practice spend their equitable share allocations more or less how they wish, short of embezzling the funds (Robino, 2009). Therefore, faced with other more pressing service delivery needs climate Change always ends up at the losing end, as it is neither a policy nor legislative priority at municipal levels neither is it a funded mandate that Municipalities have to account on. From an institutional Theory perspective much of this behaviour can be attributed to decoupling by municipalities considering that the devolved three sphere intergovernmental system in South Africa confers and guarantees great autonomy to each sphere of government. According to Bromley & Powell (2012) in the government and Civil society settings characterised by stretched human and financial resources—external buffering is a common practice—the impulsive reaction to retain internal balance in the face of external pressures. If looked at from an intergovernmental perspective, the absence of distinct prescriptions on climate funding under the equitable share allocation system represents policy-practice decoupling in that while the White Paper on Climate Change Adaption clearly upholds the need for sufficient funding to sub-national tiers of government in practice however funding is scant and non-prescriptive.

Another example worth noting is that though the provincial and local governments command a fair deal of administrative, political and fiscal autonomy the policy formulation and implementation mandate remains a national function (Robino, 2009).

Therefore, borrowing from policy implementation theory it's prudent to say by design the policy implementation framework in South Africa is predominantly top-down. The problem over the years since 1996 is how to effectively enforce policy across spheres evenly (Brauns et al, 2014; Robino, 2009). Its therefore justifiable to attribute the policy implementation gap under adaptation mainstreaming to the inherent shortcomings of the Top-Down perspective such as misalignment between policy imperatives and context on the ground and the exclusion of input from "street-level" bureaucrats and local politicians in setting implementation plans and goals (Paudel,2009). From an institutional theory perspective this can be attributed to inertia or defiant behaviour from either local bureaucrats or local politicians since it either threatens the status quo or does not hold much political benefit in terms of political brownie-points (Ashworth et al, 2009).

2.8 CONCLUSION

Overall South Africa's national response to date mirrors that of global best practice; government has met all its reporting requirements and international commitments to the UNFCCC in terms of the three National communications and the Nationally Determined Commitments (NDCs) under the Paris agreement-despite being thought of as inadequate. The National Development Plan is firmly aligned to the National Climate Change Policy and there is work underway to align all the sector policies and strategies including those of sub-national governments. While there is still a lack of clarity and consensus in what should constitute the National Mitigation plan; credible work has been done in the development of a National Adaptation Strategy and the National Climate Change bill with all its misgivings will soon be promulgated into Law. What is missing however in the political rigour required to place municipalities at the centre of policy response and provide the necessary mechanisms to enable adequate responses. To date Climate Change remains an unfunded mandate as far as the national fiscus is concerned; Treasury makes no allocations to sub national

government specifically for climate change interventions, while it's not mandatory for accounting officers and their political superiors to allocate resources towards Climate responses. South Africa is lagging behind global trends that attest to a shift towards the localisation of the fiscus to finance climate Change and its prioritization in the establishment of the necessary checks and balances to ensure there is adequate capabilities at the sub-national level to implement the policy imperatives. Consequently, there is an endemic culture of indifference or gradual accommodation of climate change by politicians who control the allocation of local fiscus, and have to deal with a myriad of other “more pressing” demands. The failure of politicians to put their “money where their Mouths are” is the main cause for institutional decoupling, as earlier alluded to and lies at the nexus between political expedience and doing the right thing. This scenario raises the need for this study; which attempts to highlight the complexities that characterize policy implementation at the local levels vis-à-vis mainstreaming climate change considerations into IDPs as a means of climate proofing conventional development programmes. The study employs the use of case studies of three municipalities in the Western Cape Province across all three municipal types in the country namely Metro, District and Local municipalities. The rationale behind conducting this study across all three types of municipalities is to retain objectivity, relevance and applicability of recommendations of the final research paper across all municipalities in the country.

CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.1 INTRODUCTION

When undertaking research on the inherent challenges within Climate Change mainstreaming that account for the policy-practice decoupling, it is essential to employ a diversity of data collection and analytical methods so as to guarantee the highest possible level of credibility and objectivity of the findings and final analysis. The interdisciplinary nature of Climate Change mainstreaming compelled the use of Triangulation in this study-since it's a powerful technique that enables the validation of data through cross verification from a multiplicity of sources or research methods (Honores,2017). The study employed different data collection tools in the form of online questionnaires, face to face interviews and focus group discussions with Municipal officials. The primary data collected from these tools was then supplemented by secondary data from review of policy, strategic and legislative documents within the three spheres of government.

Furthermore according to Holtzhausen,(2001) despite the worldwide debate among researchers on which is the best research approach both Qualitative and Quantitative approaches have gained prominence in the higher education field and that they should be equally regarded and can be complementary. Holtzhausen encourages the use of both approaches in any given work of research as it increases the levels of reliability and validity of the research results. This paper therefore employed a multimethod research approach embracing both qualitative and quantitative methods. This Triangulation between the two methods did not only provide a more complete (holistic) depiction of the cases under study which in this case are the municipalities (Patton,1999, Denzin,1978) it accommodated the pluralism in the choice of theoretical frameworks that characterize this study (Flick,2002; Robino,2009). As earlier alluded to the study employed elements from both Policy implementation research and

Organization theory particularly institutional theory. According to Olsen, (2004) this combined use of triangulation and pluralism tends to support interdisciplinary research than a single disciplinary approach. The use of this combined approach is appropriate in shedding more light on an interdisciplinary phenomenon such as climate Change mainstreaming. This Chapter will review the study's design; the selection of cases, the collection, analysis, and synthesis of data; and the limitations of the study. Each respective section describes the methodology employed in exploring and the writing of each qualitative case study.

3.2 RESEARCH DESIGN

A mixed method approach was adopted for this study; a combination of qualitative multiple-case study approach coupled with computer aided quantitative analysis was utilized. This was done in order to enable an in-depth analysis of the municipalities as complex systems, as this provides tools for researchers to study complex phenomena within their contexts (Baxter and Jack, 2008) Olsen 2004). Olsen (2004) calls this the methodological triangulation of discourse analysis, a combination of a qualitative methodology and survey data analysis that counts as quantitative methodology. What this study succeeds in doing is employing qualitative insights to interpret quantitative survey data.

A multiple or collective case study approach allowed the researcher to analyse within each setting i.e. Municipal type and across the municipalities. It allowed the researcher to examine each case in relation to the other two, in as far as Climate mainstreaming is concerned. A constructivists approach was employed here; Pluralism, not relativism, was stressed with focus on the circular dynamic tension of subject and object" (Miller & Crabtree, 1999, p. 10). The intent was also to cover contextual conditions that are relevant to each of the phenomena under study, as It wouldn't have been possible for the author to have a true picture of mainstreaming decision making without considering

the context within which it occurred. This design was therefore, best suited for this study's data needs as well as the need for a detailed understanding and insight (Mouton, 2008) into the Climate Change mainstreaming processes across all three cases and the various challenges thereof.

The research is ultimately descriptive, this type of case study is used to describe an intervention or phenomenon and the real-life context in which it occurred (Yin, 2003). Even the quantitative data in the Findings Chapter has been presented in a illustrative manner to substantiate the qualitative narrative. It is meant to illuminate how climate Change is mainstreamed in each Municipality including the intricacies of how this relates to government systems and Structures– without overlooking the moral and ethical obligations borne by government both to the public and international commitments.

3.3 SELECTION OF CASES

The West Coast Corridor was selected as the study area; it lies along the Cape West Coast and falls within four municipalities, namely: The City of Cape Town Metro, the Swartland Local Municipality, and the West Coast District Municipality. These areas have already registered the highest sea level rise in the past decade and it's also predicted will face the most severe water shortages in the next 40 years all due to global warming (DEAT, 2008, DEAT, 2012). The region has since been declared one of the two most important adaptation corridors in the Western Cape due to its rich biodiversity and its importance to the country's economy.

Based on the above, this study selected a number of municipalities from the region across the three main Municipal categories in the country and assessed their respective ability and progress towards meeting the mainstreaming objectives of section 10.2.6 of the climate policy. Initially four municipalities in the Western Cape's west coast region were chosen; namely City of Cape Town, West Coast District,

Swartland and Saldanah Municipalities. However, Saldanah was later abandoned due to lack of corporation from relevant officials; the municipality failed to provide consent for the research programme in time and hence had to be left out of the study area.

Participants for this qualitative case study were purposefully sampled (Baxter and Jack, 2008), from among Municipal employees. The rationale behind the selection of senior municipal officials as primary interviewees is that they are the decision makers and some even accounting officers thus would have a better understanding of the status of mainstreaming in their respective municipalities.

3.4 SAMPLING

The study selected a target population, from the 13 climate sensitive departments, of approximately 140 respondents in the middle to senior management tiers across the three municipalities. These departments (See figure 4.2 below) were denoted as climate sensitive sectors due to the fact that their set of services are susceptible to changes in climate and are the most vulnerable to the impacts of climate change such as floods, droughts and cyclones (IPCC, 2007; Agrawala et al, 2008).

The number 140 was selected by the researcher as it was felt sufficient to achieve the needed saturation. According to Glaser and Strauss (1967) Saturation occurs when adding more participants to the study does not result in additional perspectives or information. The 140 respondents were to be selected from the 13 climate sensitive sectors which meant an approximate number of 10 respondents per sector including their respective councillors. All the 140 were included in the electronic data survey i.e. a link to a web based questionnaire was sent to all of them via email and only 72 responded. In terms of the follow up interviews, Purposeful sampling was used to select 26 municipal officials at senior management and senior councillors levels as key informants (Paton, 1990) i.e. Heads of departments and their political heads of portfolio committees overseeing these departments. Once these initial key informants were selected a snowballing technique (Terre Blanche et al, 2006) was employed to

recruit other senior officials in these climate sensitive departments with a pre-determined sample size of 40. All in all about 38 officials were involved in the follow up interviews and four focus group meetings were conducted with a total participation of not more than 40.

The selection of study areas was done through subjective or judgment sampling; these are sampling techniques that rely on the judgment of the researcher in selecting the study units (e.g. demographic group or organization) (Mouton, 2008). The decision was informed by the results from climate models both global and regional which predict that the south-western part of South Africa will experience a drying trend characterized by a decline in rainfall and a rise in average temperatures by 2030 due to the changing climate (DEAT, 2008; Faling et al, 2012).

3.5 DATA COLLECTION

Data collection for this qualitative Multiple-case study exploited multiple sources, a strategy which enhances data credibility (Patton, 1990; Yin, 2003). The data sources included face to face interviews, online questionnaires, primary policy and strategic documents, as well as focus group discussions and Researcher Journals. In undertaking the research, a variety of research and assessment criteria were employed based on the ethos of Triangulation (Creswell, 1998). Both literature review and interviews were conducted as primary methods of data collection and the various sources of information collected were triangulated to ensure objectivity and accuracy of collected data. Semi-structured open-ended question schedules were tailored for each interviewee to guide each interview but allowance was given for Probing follow-up questions aimed at bringing out certain themes in more detail, Detailed notes were taken of each interview by the researchers; these were later reread, verified, and collated during data analysis and report writing. In addition to the interviews, documentary sources such as government policy documents, reports and studies conducted by independent institutions were also utilized to gain a thorough insight and

understanding of the key issues in Climate mainstreaming in as far as Municipalities are concerned and challenges relating to government responses i.e. policies and strategies, and how effective or ineffective these have been.

3.6.1. Procedure

The core investigative method of data collection for this study was a set of questions based on the available body of Knowledge on climate proofing and constituted in the form of an online questionnaire that was sent to 140 informants via email for completion. This core set of questions were primarily designed to collect information from key informants across all three municipalities namely City of Cape Town Metro, the Swartland Local Municipality and the West Coast District Municipality.

Follow up in person interviews with key informants were conducted after a review of responses from electronic questionnaires. Meeting requests were sent to heads of departments and Members of Mayoral committee who, at the end of each interview, were then asked to recommend other department staff who they felt would provide more insight hence the snowball effect.

Four Focus group discussions with some Heads of Departments(HODs) and other relevant officials from climate change sensitive departments, were also conducted. As informed by Stewart and Shamdasani(1990) the ideal size of these focus groups was six to 10 participants and the discussions lasted for approximately one and a half hours. A world Café approach was used for each focus group meeting which made them very interactive. All data collected from the municipalities was shared with provincial and national departments in charge of climate change mainstreaming in order to ensure reliability and credibility.

Furthermore empirical assessments of organisational structures and processes, policies and bye-laws relative to climate change were undertaken in order to determine both the baseline and systemic gaps.

3.6.2. Document Review

The project undertook a review of a sample of local development programme documents currently underway in a selected number of Municipalities with the aim of creating a baseline of how much has already been done in incorporating Climate change into development programmes in South Africa. A desk review, was done, of a number of laws relating to sound environmental management such as the Environmental Management Act of 1998, White Paper on Integrated Pollution and Waste Management of 2000; the White Paper on a National Water Policy for South Africa, 1997 and the National Water Resource Strategy. Furthermore, a review of studies conducted to mainstream sustainability into IDPs was undertaken with the aim of benchmarking how the integration of Climate Change adaptation can be done. Literature from sustainable development planning modules from the Stellenbosch school of public leadership such as “Development Planning Theory and Practice” and “Development Planning Systems, Policy and Law” were also extensively consulted for an in-depth understanding of the policy and legal context for IDPs as well as the theory and practice of the IDP process. An assessment was undertaken of other empirical studies and best practice that have been done both nationally and internationally with the aim of contextualising the lessons learnt to the South African development Terrain as much as is possible.

3.7 DATA ANALYSIS

Analytical induction techniques were used to systematically examine data to find similarities and connections with the aim of finding casual relationships and be able to explain the nature of these relationships (Ratcliff, 1994; Manning, 1982 and Znaniecki, 1934). A hypothesis was formulated for each question in the four sections that comprises the questionnaire and each case (municipality) was then assessed if it confirms the hypothesis in question or it its deviant to it. The formation of each hypothesis was achieved by triangulating the assertions from reviewed literature, with

the responses from interviewees and observations made by the researcher. The hypotheses were developed as follows

- 1) All the officials have adequate knowledge of climate change adaptation mainstreaming
- 2) Departmental systems and structures are all fine-tuned to facilitate mainstreaming
- 3) The prevalent organizational culture is one that embraces and celebrates change
- 4) There are healthy and functional intergovernmental relations in place that facilitate mainstreaming

The quantitative analysis was based on response data generated by the online survey platform in the form of Excel sheets. Pivot tables were then used to reorganise the data in a way that either confirms or negates the hypothesis developed during the qualitative analysis. Graphs were then produced from the reorganised data which clearly show the prevalent situation in each municipality. These graphs form the core elements of the discourse in the Findings Chapter.

3.7.1. Limitations of the data

While the data presented in this study is a liable and its veracity can be authenticated by the researcher as valid accounts of the opinions and experiences of the government officials interviewed there were some shortcomings of both an ethical and operational nature. Firstly, there were time and budget restrictions in terms of a short window to collect the data and a low budget which in turned greatly limited the scope and extent of both of data collection and analysis.

A second limitation is inconsistencies and discrepancies in the data provided in certain sectors which is indicative of a lack of a data management system in some City departments.

The third hurdle was social response bias whereby respondents gave agreeable answers rather than the actual reality. For reason ranging from confidentiality which comes with non-disclosure clauses to attempts of wanting to present the respective municipalities in good light, some responses needed more time to be verified.

3.6 CONCLUSION

The chapter dealt with the research methodology and designs, the target population, sampling, data collection and analysis techniques, and limitations of data. The next chapter provides an outline of the main findings of the studies and does a deductive analysis.

CHAPTER FOUR

PRESENTATION OF FINDINGS AND ANALYSIS

4.1 INTRODUCTION

As a first point despatcher it is imperative at this stage to revisit and restate the main research questions that informed this study and show how these questions are answered by the findings. The main aim of this study was to look at how institutional change in this particular case mainstreaming of Climate change considerations into municipal-wide decision-making processes is taking place if it is taking place at all. In essence, this paper attempts to answer the following key research question: what intrinsic institutional issues within the three spheres of government , particularly local government, are hindering the institutional change required by section 10 of the National Climate Change Policy. The institutional change in question being the mainstreaming of Climate Change into Integrated Development Plans(IDPs). Put in other words, why is this institutional change (Mainstreaming) not taking place, within municipalities, at the pace and depth stipulated in the national climate change Policy? Hence the findings in this chapter should shade light on the following:

- The nature of this institutional change: is it exogenous (Top-down) or endogenous (Bottom-up), what is the effect of isomorphic forces (in this case section 10, particularly subsection 10.2.6 of the National Climate Change Policy (the White Paper) and Chapter 5 of the National Development Plan: in bringing about or inhibiting the desired change.
- The process of institutional change: is this change sudden or gradual, a co-operative venture or a result of conflict.
- The outcome of Institutional change: is the emerging institution a reflection of the isomorphic.

The findings presented in this section are therefore derived from these concerns and

each section starting from 4.3 to 4.7 ends with a conclusion that ties it to the research questions.

Furthermore, In this very chapter, an attempt is made at deducing, based on the findings outlined in this chapter, what the implications are for climate Change mainstreaming into Municipal IDPs.

4.2 BACKGROUND

Over a period of two months, an online survey was conducted to solicit the views and experiences of senior municipal officials on the level of mainstreaming in their municipalities, using the question pro online survey platform. About 72 respondents participated in the survey and follow up interviews from across three municipalities namely the City of Cape Town, West Coast District municipality and Swartland local Municipality. The majority of respondents were male at 65% compared to 35% females ranging between the ages of 30 to above 50yrs old. In terms of racial distribution, 65% of respondents were Caucasian followed by 25% coloureds and 1% African while Indian and other ethnic groups were not represented. The City of Cape Town (COCT) Municipality had the highest percentage of respondents at 43% while the Swartland Local Municipality and the West Coast District Municipalities (WCDM) stood at 39% and 17% respectively. All the three municipalities fall within the Western Cape Province, while COCT is a stand-alone Metro Municipality, the Swartland local Municipality falls under the West Coast District Municipality's (WCDM) jurisdiction.

The questionnaire was broadcasted to all the climate sensitive departments (See figure 4.2) and respondents came from these and other departments in each of the respective Municipalities. The questionnaire was comprised of 35 questions divided into five main sections of enquiry. Section one was focused on the departmental demographics, focusing on aspects such as age, gender, race, level of education,

management level and duration of service in that particular municipality. Section two was designed to assess the level of knowledge, of each individual respondent, on climate change adaptation and its mainstreaming primarily from a theoretical perspective and also to find out if there was a need for further training in this. The third section dealt with each department's systems and structures in relation to level of mainstreaming of adaptation concerns into programmes and plans; resource allocation and measurement of impact of these adaptation activities. The fourth section was addressing the issue of the inherent organizational culture and its interplay with change in general and particularly what role senior management play in driving change and systems put in place to incentivize and reward innovation for change among department employees. The Fifth and final section looked at the level of intergovernmental relations vis-à-vis the implementation of climate adaptation mainstreaming at the three municipal levels. In other words, how much technical and fiscal support do municipalities get from provincial and national governments.

This chapter, on findings, is therefore also structured according to the sections in the questionnaire as outlined above.

4.3. A POLICY CONTEXT IN TRANSITION

It is imperative to note that the South African climate change policy and legislative framework is in its infancy and in transition-hence still fragmented since the publication of the NCCRP in 2011. In response to the directives of the NCCRP the national Department of Environmental Affairs (DEA) is now developing the climate change Act and the National Adaptation Strategy (NAS); and none of the two documents has received cabinet approval yet as they are still in the drafting and consultative stages respectively. The NAS is undergoing public comment in readiness for cabinet approval while the Act is in its drafting stages undergoing stakeholders' consultation; so, none of these documents is under implementation. Meanwhile, prior to 2011 a number of sector departments, Provincial governments and Municipalities had proactively

developed Climate Change Adaptation response strategies in the absence of a national policy. Some of these strategies have since been revised in order to be aligned to the NCCRP while others are yet to accomplish this feat.

Consequently, South Africa's Climate Policy implementation efforts are faced with a challenge of existing institutional and legislation fragmentation characterized by the lack of an incumbent National Climate Change Act to ensure enforcement and compliance; a yet to be implemented NAS and unaligned sub-national adaptation strategies and a glaring lack of effective cross-sectoral and intergovernmental cooperation. The positive aspect however, is that there is now clear policy direction since 2011 and with the right mix of political will, resource mobilization and allocation and institutional capacity building the salient goals of the NCCRP are achievable.

4.3.1. Western Cape Policy context

The Western Cape has a well-developed climate change policy environment (GIZ, 2017). As part of its climate response measures the Western Cape provincial government commissioned a study in 2005 entitled the "Status Quo, Vulnerability and Adaptation Assessment of the Physical and Socio-economic Effects of Climate Change in the Western Cape". The study identified the province's most vulnerable sectors as Agriculture, Biodiversity, Health, human settlement, coasts and water as well as climate impacts experienced by the province such as droughts and floods including future impact projections such as increased rainfall and possible rainfall reductions (Western Cape Government, 2014). The province's Climate Change Strategy and Action Plan was then developed in 2008 (Department of Environmental Affairs and Development Planning 2008; Coastal & Environmental Services 2011). This Strategy and Action Plan had a developmental skew to it and hence placed lot of emphasize on adaptation-Linking developmental priorities to climate impacts (Coastal & Environmental Services 2011). An update of the western Cape Provincial Climate Change Strategy was undertaken in 2014 with the primary aim of aligning it with the National Climate Change Response Policy's drive to mainstream climate change

actions and related issues throughout relevant Provincial transversal agendas” (Western Cape Government: Environmental Affairs and Development Planning 2014). Therefore, in as far as Adaptation response planning the province has some of the most advanced preparatory work done to date in the country at the provincial level however more work still needs to be done with implementation at the local levels.

4.3.2 Conclusion and relevance to Research Questions

This section is closely tied to sub-question 1 which asks if the adoption of Climate Change mainstreaming at the municipal levels is exogenous (Top-down) or endogenous (Bottom-up), the narrative above and as will be revealed in the succeeding sections, indicates that this is a Top-down process hence very much exogenous. However, does this mean there is no inherent volition from the municipalities to address climate change? The answer is there is, but it’s not a top priority- as it is greatly hampered by other competing and pressing needs that are prioritized in place of climate change. Looking at how some municipalities still don’t have dedicated climate change departments and how underfunded those in existence are, it begs stating that without the push from National and provincial departments climate change responses would remain non-existent or reactionary at best.

4.4 DEPARTMENTAL DEMOGRAPHICS

Figure 4.2 below presents an outline of the number of respondents from each department-the list of departments was based on the city of Cape Town’s department structure, as a Metro, which did not necessarily match the delineation of departments in the District and Local Municipalities due to the difference in mandate as outlined by both the Municipal Systems Act and Municipal Structures Act. The lack of respondents in some departments therefore can be attributed to the lack of a specific unit or department by that name at the lower tiers and in cases where there was not a respondent from an existing department follow up interviews compensated for that gap. These departments, as outlined in the methodology chapter, were selected as

climate sensitive sectors due to the fact that their set of services are sensitive to changes in climate and are the most vulnerable to the impacts of climate change such as floods, droughts and cyclones (IPCC, 2007; Agrawala et al, 2008).

Figure 2.1: Respondents by Municipality.

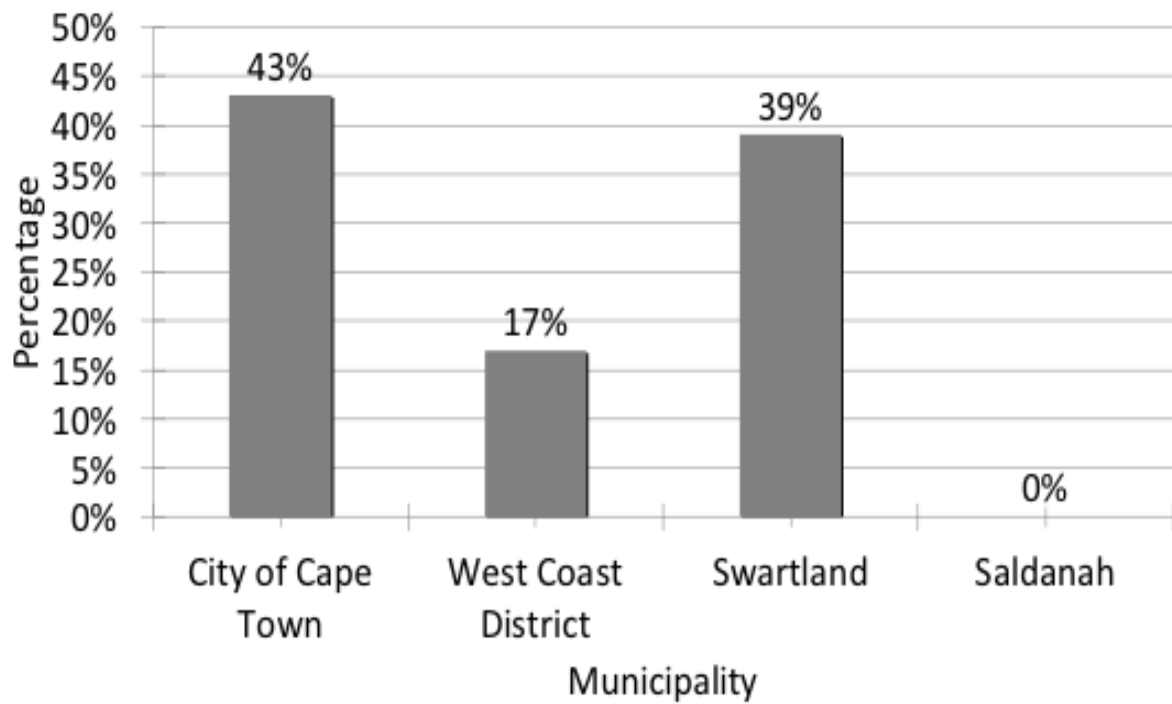
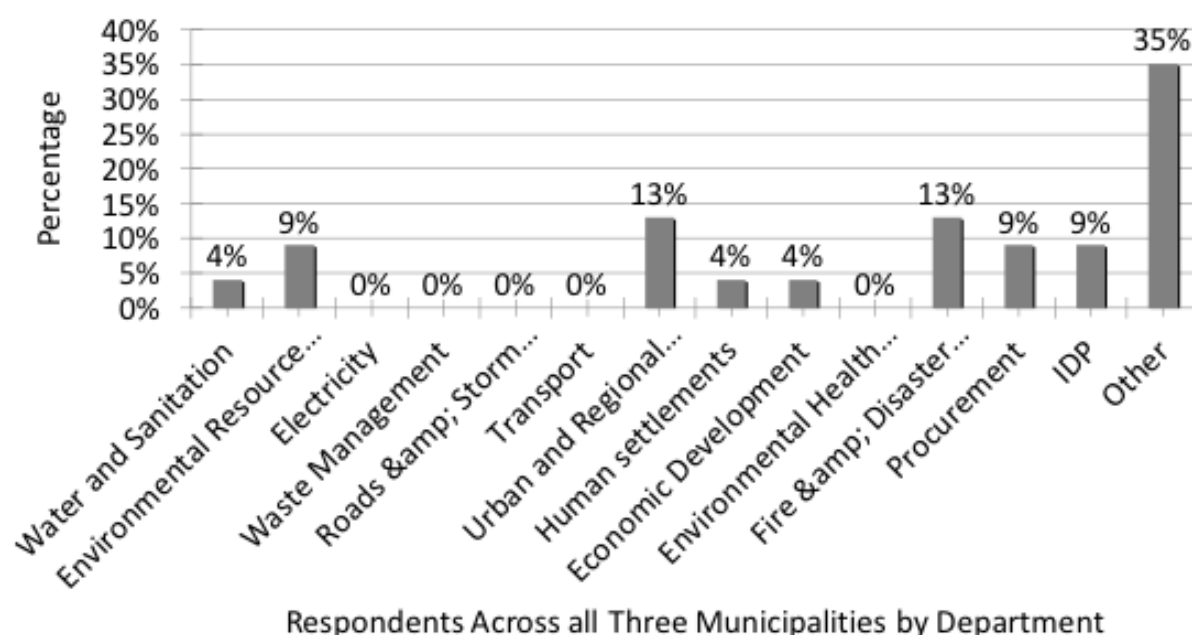
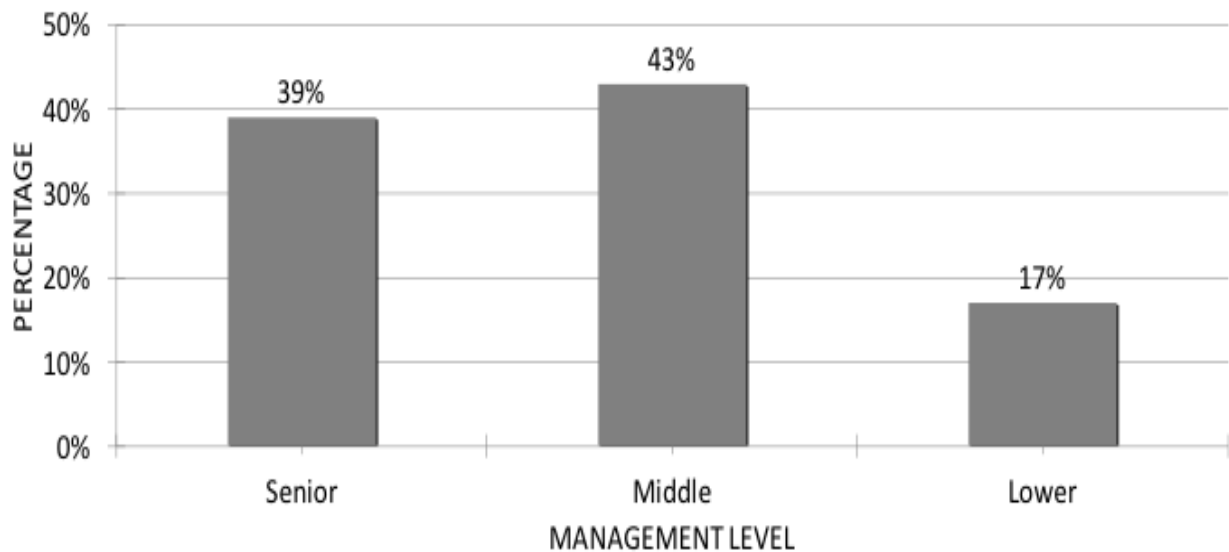


Figure 4.2: Respondents by Department



The survey results indicate that about 82% of respondents were either middle or senior management (see Figure 4.3), which is significant for this particular study in that they comprise the decision-making segment of workforce and are thus better placed to know the level of mainstreaming work being undertaken in terms of strategy and resource allocation. The study deliberately targeted senior managers upwards specifically accounting officers who retain fiduciary responsibilities. On the other hand however, the small number of participants from the lower levels of the hierarchy could mean lesser credibility of the organizational culture data as middle and senior management staff would naturally be more biased towards painting a rosier picture of the institutional dynamics. To mitigate against this the researcher deliberately held focus group meetings with lower tier staff during the follow up phase in order to authenticate responses on organizational culture. A balanced review of these responses is made under the organization culture section below.

Figure 4.3: Respondents by Management Level



Meanwhile, the levels of education were included in the study as a measure of the ability of municipal staff to grasp new and complex concepts as well as comprehend the intricacies of Climate science and adaptation mainstreaming. The general assumption made by the researcher is that it is fairly easier for municipal staff with some level of tertiary education to grasp the concepts of climate change and the intricacies of mainstreaming. From the data in Figure 4.4, all three municipalities seem to fairly have a good level of education among its staff particularly those in senior management levels. Meanwhile and as would be expected, Figure 4.5 shows that the COCT has the highest number of staff with post-graduate qualifications, followed by the District Municipality and the least number is found in the local Municipality. The reason for this trend is simply one of affordability; Municipalities in urban areas such as Metros have wider revenue bases hence deeper pockets and can afford to attract the best qualified staff who they pay pretty competitively as compared to the local municipalities with weaker revenue bases (Faling et al, 2012).

Figure 4.4: Highest Academic Qualification

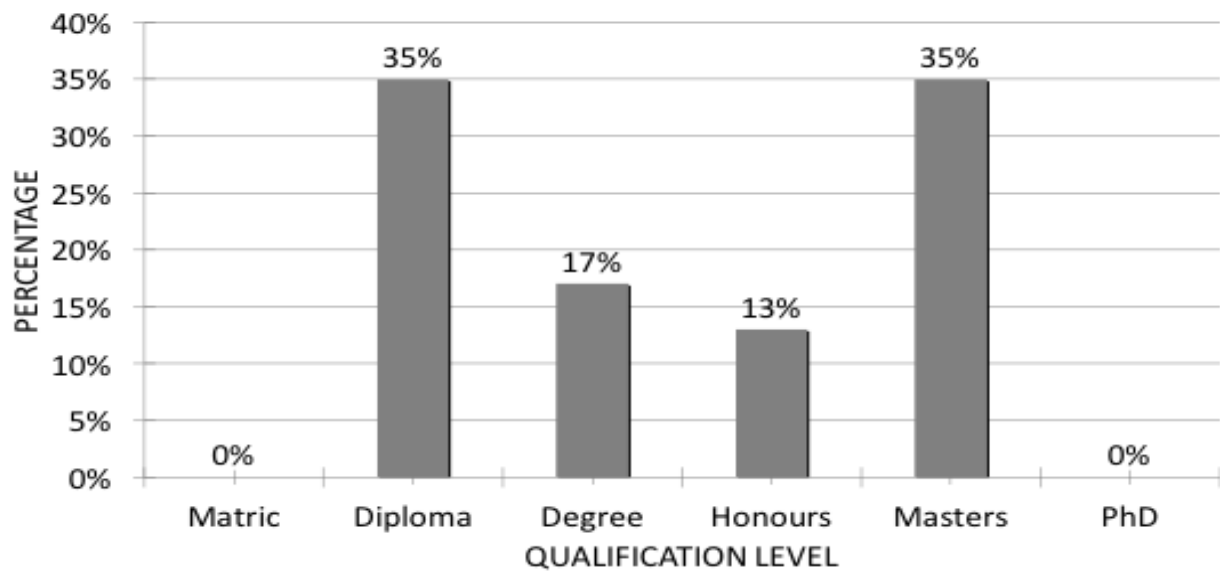
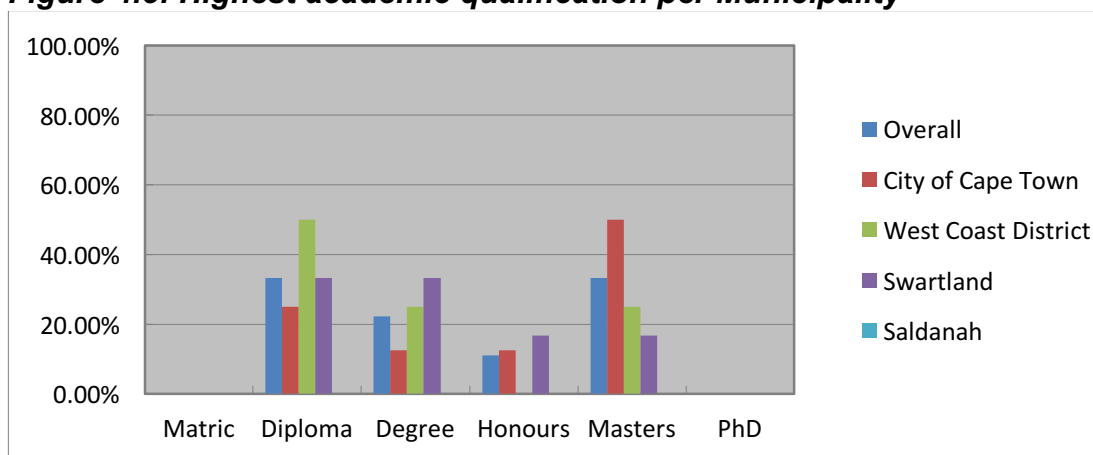


Figure 4.5: Highest academic qualification per Municipality



It was also assumed by the researcher that the longer an employee stays in the municipality the better they are positioned to understand the municipal structures and systems and hence be better positioned to interpret adaptation concerns into them. This position is informed by the researcher's own experience while working for a municipality-Institutional memory is essential in the planning and management of

change (North, 1990). The results in Figure 4.6, indicate that in all three Municipalities, on average, 72% of the senior staff have been working for the same local government for more than 12years which is a very healthy dose of institutional memory essential for mainstreaming (Measham et al., 2011). However, on the other hand, longevity in service especially in the same position for many years might be a premise that's breeds resistance to change as the incumbent would have become used to the systems and structures as they are and would be more prone to retain the status quo. The latter is further explained in the subsequent chapter on institutional culture.

Figure 4.6: Years of Service in Public Service

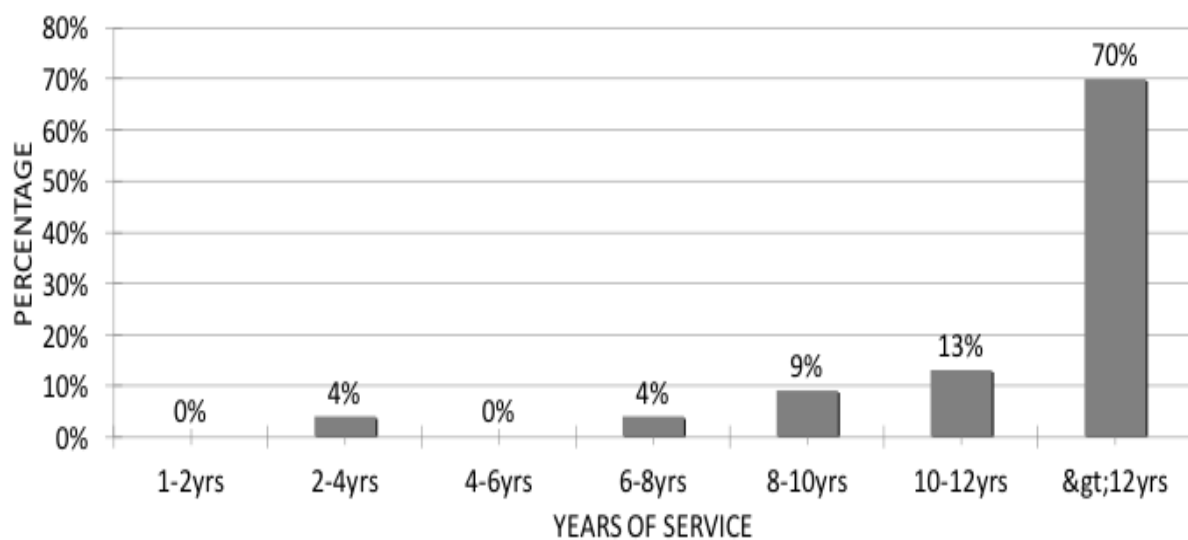
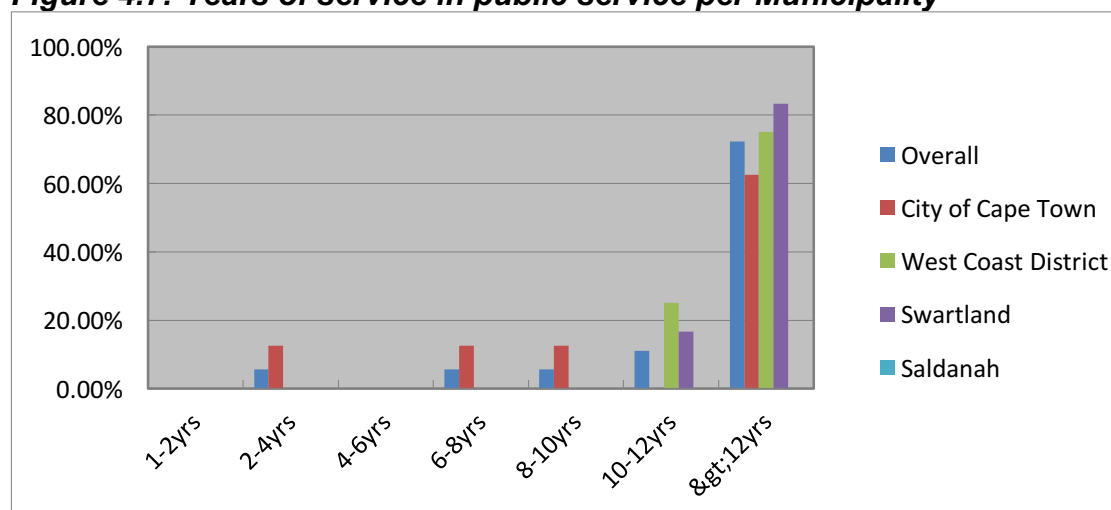


Figure 4.7: Years of service in public service per Municipality



4.4 INSTITUTIONAL CAPACITY ON CLIMATE CHANGE ADAPTATION

4.4.1. Overall level of Knowledge on Adaptation

In any institution, the retention of staff with adequate levels of individual technical Capacity are essential for climate governance and hence it was vital for the study to establish the level of understanding of Climate change adaptation among senior management staff. Respondents were asked if they have adequate conceptual knowledge of what climate change adaptation is-the results revealed that 64% of respondents felt they have adequate understanding of what climate change adaptation is while only 36% lack the conceptual understanding. Incidentally, the 36% includes the 9% who are undecided; uncertainty in this matter was considered as an indicator of a lack of adequate knowledge on the topic. (see Fig.4.8 & 4.9 below).

Figure 4.8: Overall level of Adaptation Knowledge

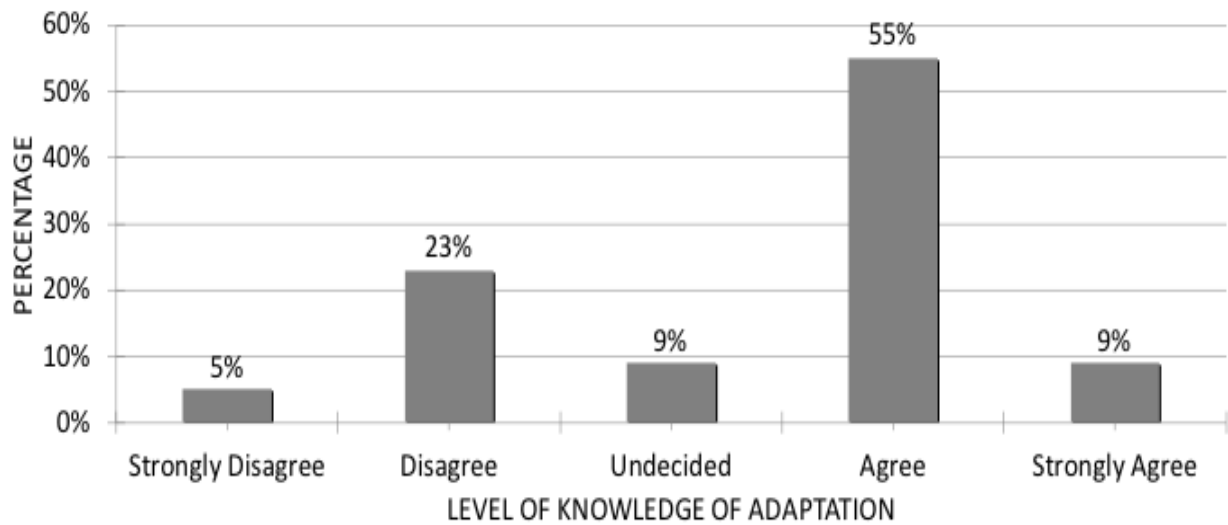
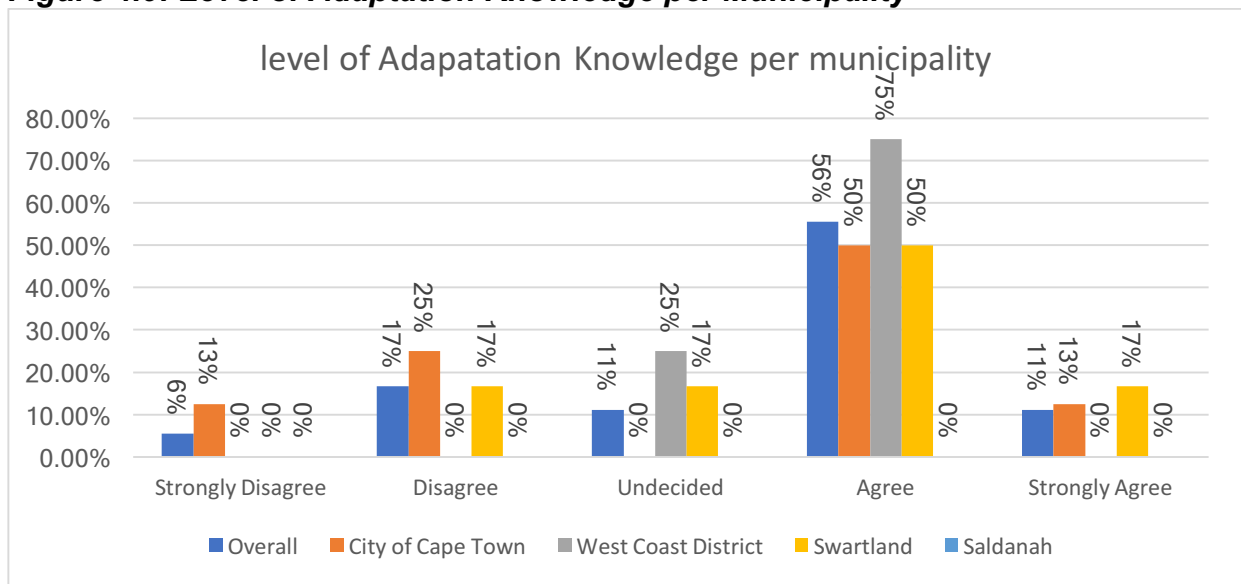


Figure 4.9: Level of Adaptation Knowledge per Municipality



A close up look at the distribution of data in figure 4.9 per municipality reveals a rather unexpected outcome; the west coast district municipality has the highest number of respondents with adequate knowledge at 75% followed by Swartland Municipality at 67% and Lastly the City of Cape Town at 63%. This result is in contrast to the general

held view that urban or metro municipalities have better knowledge levels of climate Change than peri-urban to rural municipalities. However, the researcher is aware that while conceptual understanding of adaptation is a prerequisite for mainstreaming actual mainstreaming knowledge and practical experience is more essential. The study has revealed that the City of Cape Town has made more strides towards mainstreaming than either of the other two municipalities endogenously as will be outlined in subsequent sections. In the same vein though, the district Municipality has in recent months had the best exposure to mainstreaming capacitation intervention by the national department of Environmental affairs, so there is a fairly higher understanding of what mainstreaming is but the Municipality has limited experience in the actual aspects of mainstreaming.

4.4.2 Level of understanding of Adaptation Mainstreaming

When asked whether they feel they have sufficient understanding of what climate change adaptation mainstreaming is, 55% of respondents have adequate conceptual understanding of mainstreaming while 46% do not have sufficient understanding of mainstreaming (Fig. 4.10). Westcoast district municipality had the highest number of respondents with adequate knowledge of what adaptation mainstreaming is at 75%, followed by City of Cape Town at 63% and Swartland Municipality at 50%. (fig. 4.11)

Figure 4.10: Overall level of Mainstreaming Knowledge

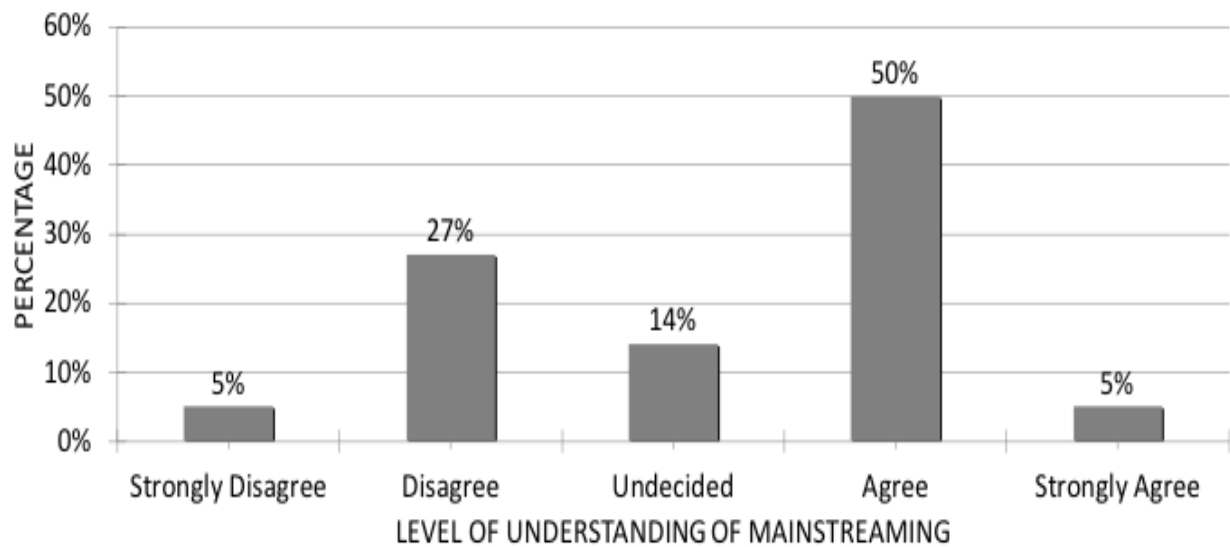
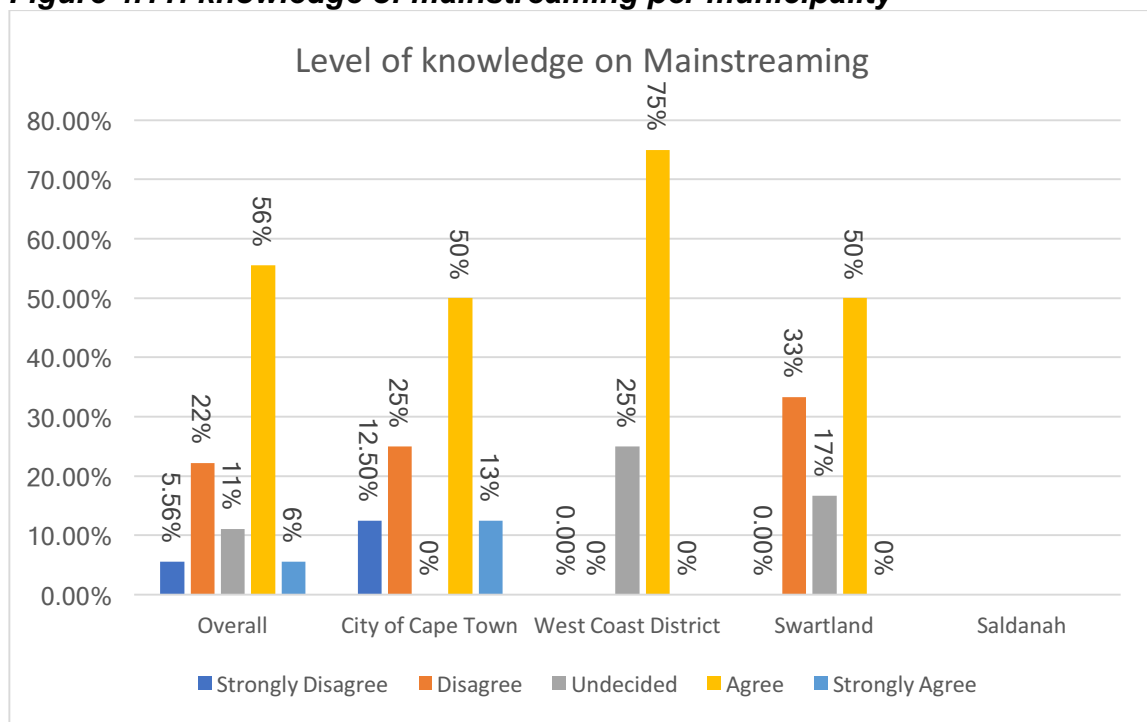


Figure 4.11: knowledge of mainstreaming per municipality



4.4.3. Level of Skills in and Appreciation of the Importance of Adaptation Mainstreaming

This level of knowledge is also coupled by a healthy appreciation of the need to mainstream adaptation concerns into departmental plans. When asked whether the respondents were aware of the importance of mainstreaming climate change adaptation into their respective department's plans (see Figure 4.12), 73% of municipal officials feel it's important to mainstream adaptation concerns into departmental plans however this appreciation is not backed up by actual on the ground and deliberate mainstreaming work. This can mainly be attributed to two factors 1) there is no deliberate department wide mainstreaming programme in any of the Municipalities with the exception of Cape Town which has made an attempt in that direction by drafting departmental adaptation Action plans. Secondly, and as a result of the lack of institutionalized mainstreaming efforts, 69% of respondents do not know how to mainstream climate change concerns into their work; there is a lack of skills on how mainstreaming is done (Figure 12) and this has been attributed to the fact that Climate Adaptation is a novel field at the Municipal level (Zierwogel et al, 2014, WCG, 2013). This finding supports similar findings by Faling et al, 2012, Zierwogel et al, 2014, DEA, 2011 and DEA 2017, that there is a serious shortage of necessary skills at the local government level to guarantee the success of mainstreaming efforts. One respondent also highlighted the fact that the use of consultants in interventions such as the Local Government Climate Change Support programme (LGCCSP) is also not a solution as it does not solve the problem of a lack of resident skills and is not cost effective.

Figure 4.12: Level of Appreciation of the Importance of Mainstreaming

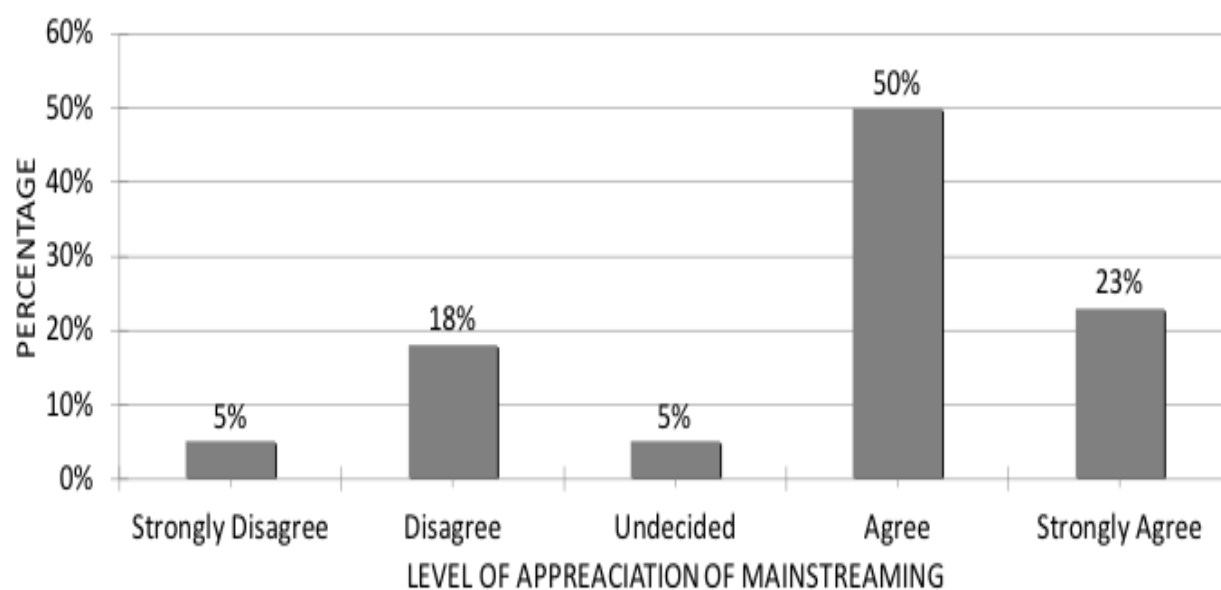
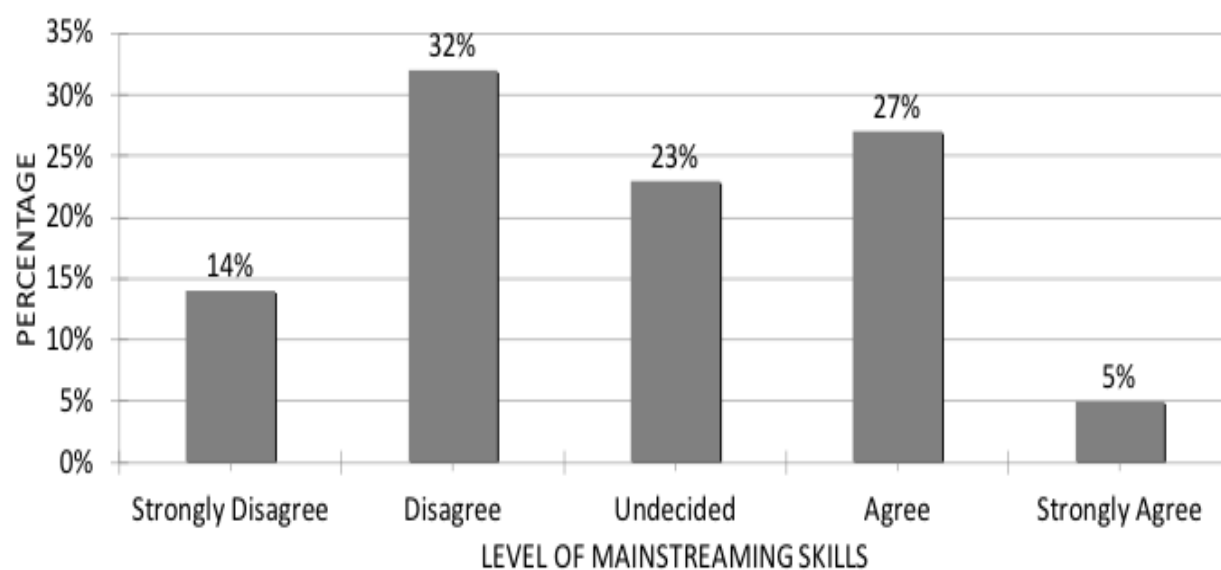


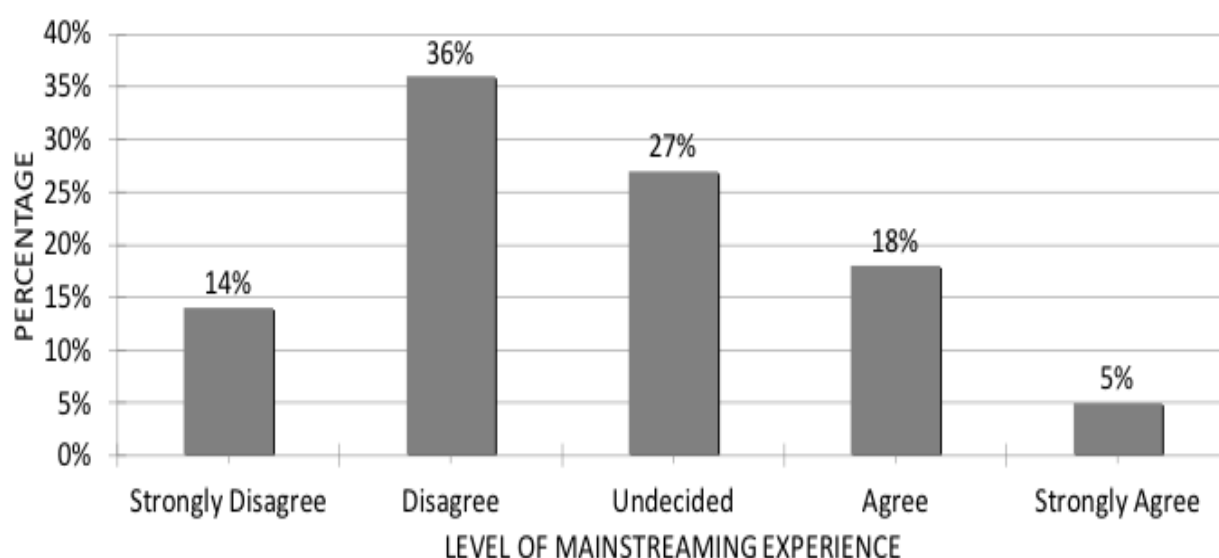
Figure 4.13: Mainstreaming Skills



4.4.4. Level of experience in mainstreaming

In the same vein, 77% of respondents had no experience whatsoever in implementing department wide mainstreaming efforts and this was confirmed in subsequent interviews that there hadn't been any mainstreaming efforts in the past and that current efforts in the case of the City of Cape Town had stalled at the draft stages (Figure 13). The City of Cape Town departmental Climate Adaptation Plans of Action (CAPAs) have been gathering dust since 2011 when the initiative was started and till now in 2017 some departments are yet to complete drafting their adaptation plans let alone implement them.

Figure 4.14: Mainstreaming Experience



Furthermore, none of the CAPAs reviewed indicate a cognizance of the need for interdepartmental corporation, they all seem to be working towards relatively narrow adaptation interventions; neither is there mention of how the selected interventions might affect other departments plans and programmes. Therefore, it is justified to say Adaptation planning within the City of Cape Town is still fragmented. A review of SDBIPs of the COCT departments with completed adaptation plans shows a glaring

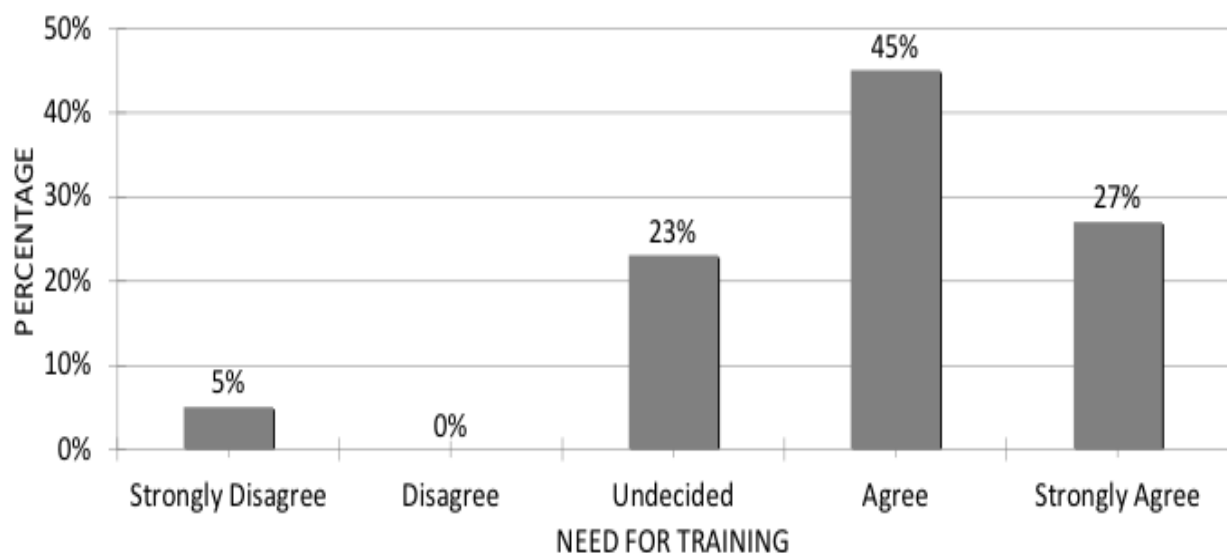
lack of integration of the identified adaptations interventions into the annual work plans or delays in implementation. This move to a sector-based approach is also regarded, by many practitioners (Parry et al (2007), Sanchez-Rodriguez (2009) & Roberts,2010), as contrary to the emerging consensus that adaptation planning should be an integrated and cross-sectoral process and often results in fragmented action at a corporate level. One good example is found in the Water and Sanitation department's CAPA which identified a number of water supply security Measures including drought response strategies, use of alternative water resources to surface water supply such as sea water desalinization way back in 2011. However, very little had been done proactively until the severe successive droughts during the 2015/16-2016/17 rain seasons which plunged the city into serious water shortages. In a race against time the city has already spent R1.2 billion, in 2017, in refurbishing its water supply infrastructure as a drought response measure. A further R3.3 billion has been earmarked towards building 8 desalination plants across the city, in the next number of months, with the hope of averting day Zero-complete depletion of usable water from surface water storage facilities. None of these measures though is officially being recognized in any of the departments' SDBIPs as adaptation measures and hence are not being approached as an adaptation intervention but rather as normal responses to drought caused water shortages thus increasing the likelihood of maladaptation.

Overall, it was observed during follow up interviews that scientific or technical sectors such as water and sanitation and electricity had relatively performed better in integrating some form of climate change adaptation thinking in their work as compared to social science sectors such as social development, housing and economic development. This was attributed to the greater use of cutting edge technology in the former sectors as compared to the latter, in their day to day operations and in responses to incidences of climate variability. It is also that these sectors are influential within the municipal hierarchy (i.e. it is politically and developmentally valued) and is relatively well resourced compared to other sectors (Roberts, 2010).

4.4.5 Need for Training/Capacitation

Essentially, very little to no adaptation mainstreaming is taking place in the three municipalities under study and When asked whether they feel overwhelmed and out of their depth when it came to planning and implementing mainstreaming programmes, 86% of the municipal officials felt out of their depths and not confident enough to take on such an undertaking in their respective departments. In fact, when asked whether they needed training in this aspect 72% of respondents indicated their need for training (figure 4.15) while 23% were undecided so in essence 95% of municipal officials who took part in the survey need training in climate change mainstreaming. Meanwhile, 41% of respondents admitted that their lack of knowledge on climate change mainstreaming had a negative impact on their level of contribution to climate change processes in their respective department while 27% were undecided. Respondents called for more concerted and deliberate efforts aimed at building municipal capacity for mainstreaming.

Figure 4.15: Need for Training



4.4.6 Conclusion and relevance to research Questions

Section 4.4 speaks to the second sub-question looking at the process of institutional change: is this change sudden or gradual, a co-operative venture or a result of conflict.

What this study does reveal however is the fact that generally across most municipalities there has been an increase in awareness of the basic conceptual aspects of climate change and an appreciation of the importance to address the envisaged impacts. However the actual implementation of mainstreaming interventions is gradual and in some cases an issue of possible conflict particularly when it come to the allocation of scarce resources. Climate Change is still viewed as a nice to have and not as a developmental imperative. The process therefore has been slow in most municipalities plagued by all the institutional inadequacies covered in this section. On a positive note however, the increased level of appreciation is essential in creating a conducive environment for securing buy-in and follow up support of change management processes effected as a result of mainstreaming.

4.5 INSTITUTIONAL SYSTEMS AND STRUCTURES

This reactional approach to climate change impacts was observed across all departments within the City of Cape town and across all the three municipalities in that Politicians and senior management staff often react to climate change whenever there is a disaster or weather event such as floods, fires and droughts and the knee jerk reaction is often to throw money at a problem in the form of emergency responses. Instead of putting in place institutional systems and structures that would address climate change on a sustained basis; the focus is on short-term relief and welfare (e.g. handing out food and blankets) rather than proactively addressing strategic planning issues that would allow disasters to be predicted and responded to in a cross-sectoral manner(Roberts,2010). One official in the disaster and Risk management department of the City of cape stated the following *“As sad as it sounds we welcome disasters*

because we use events such as fires and floods to push for policy positions or secure sustained funding for climate change related concerns because that's the only time you can get politicians to act decisively on Climate change". Another official at the West coast district Municipality stated the same point but from a slightly differently perspective "Climate change is not an electoral issue in South Africa therefore its non-implementation does not threaten the electoral position of any political party and hence politicians can afford to get away with indecision on it. He posited that It should be noted that Municipal activities are most influenced by political nuances. The political hegemony at the local levels often determines and overrides the corporate and technical positions of Municipal officials. Until Climate change can become a serious campaign issue little attention by politicians will be given to this aspect". Having said that, however, it is prudent to state that the level of knowledge on Climate Change among councillors in all three municipalities is very high; Officials spoken to believe councillors are aware of the dangers that it poses but because of other more pressing socio-economic issues climate change lies low on the list of immediate priorities.

4.5.1. Level of integration into Municipal IDP

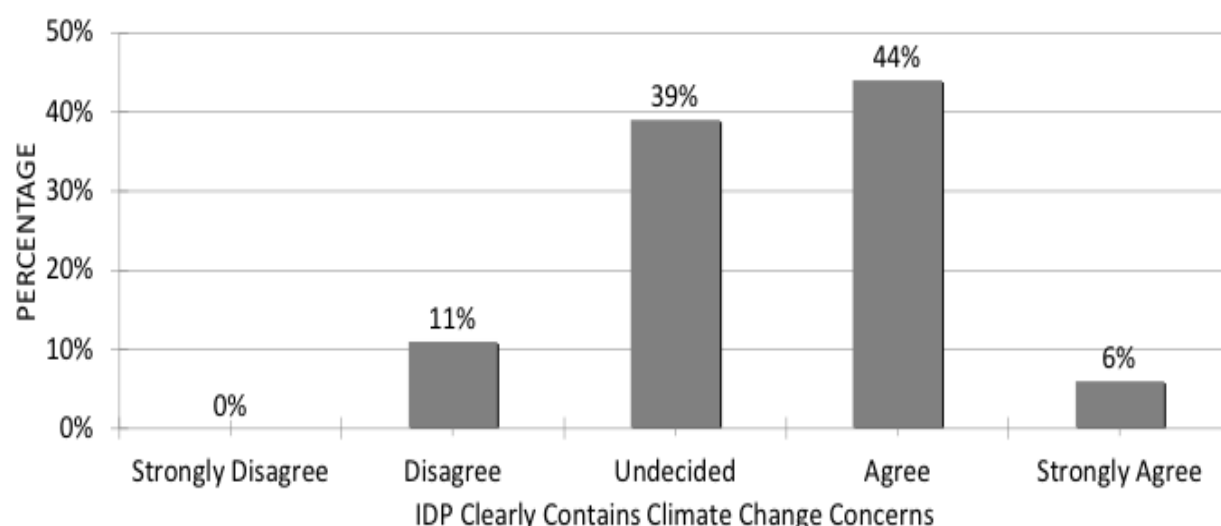
Discussions with IDP managers from the municipalities revealed that Climate change is also not a highly supported issue among communities during the public participation phase of the IDP process. This is consistent across all three Municipalities, to a point where the city of Cape Town's IDP department has had to remove "environmental issues" from their community engagement agenda. Officials spoken to believe that communities do not recognize climate change as an immediate issue as they still see it as an abstract issue with little bearing on their day to day lives- at least until recently with the persistence of the drought in the region. This agrees with findings by Pasquini et al (2013), Lorenzoni, and Pidgeon (2006), which referred to this phenomenon as a socio-cultural barrier. It relates to the wider social context in which municipalities operate, and the public values and beliefs that shape policy response to climate change, and their success. This lack of prioritization at the community level makes

councillors reluctant to push a climate change agenda that is not supported by the locals but seen as being pushed by national and provincial spheres of government.

When asked whether they thought their municipal IDP has clearly mainstreamed climate change adaptation deliverables at the Goals and Objectives level, 50% of respondents believe their IDPs contain sufficient climate change adaptation responses, 39% were undecided and 11% felt the coverage was not sufficient (Fig. 4.16). The actual words used by one of the officials is that coverage was implicit and not explicit; meaning climate change is often vaguely alluded to in these documents and by virtue of the fact that climate change is mentioned in the respective IDP documents the assumption is that something is being done about it and that the Municipalities can be accredited as addressing the threats of climate change. In conversation with respective municipal IDP officials, they admitted that no deliberate work had been undertaken by their departments to mainstream climate change at either the goals or objective levels and one official even inquired if this was a statutory requirement under either the Municipal systems or structures Acts. A review of both statutory instruments neither, Chapter 5, sub sections 23-37 of the systems Act dealing with Integrated Development Planning and chapters 4 and 5 of the Municipal Structures Act dealing with Internal Structures and Functionaries, explicitly provides for climate Change mainstreaming. Sub section 23c of the Municipal Systems Act does however, provide for the progressive realization of the fundamental rights contained in sections 24, 25, 26, 27 and 29 in Chapter 2 of the Constitution. Chapter 2 of the constitution is the Bill of Rights containing the basic human rights sections including the popular section 24-the right to a healthy environment and the right to have the environment protected. While section 24 implicitly covers climate change considerations it is not explicit enough to serve as a basis for the uniform enforcement of climate change mainstreaming across all Municipalities. Therefore, the enforcement of section 10.2.6 of the National Response White Paper on climate change is not explicitly provided for by neither Acts and is currently subject to varied interpretations

at the municipal levels and resource allocation is not mandatory but at the discretion of respective municipalities.

Figure 4.16: IDP Clearly Contains Climate Change Concerns



4.5.2. Level of integration into Department Plans

In an attempt to understand the level of devolution of climate concerns in each Municipality, respondents were asked if their departments have clearly mainstreamed climate change adaptation deliverables in their department strategic/business plans, 50% felt their department had clearly mainstreamed climate change adaptation deliverables into their department strategic/business plans, 33% were undecided and 17% felt mainstreaming had not been adequately done (fig.4.17). In essence, this was a 50-50 split in responses and therefore a review of departmental documents was necessary to reveal the actual facts of the matter. A review of SDBIPs and departmental annual plans reveal a rather staggering lack of adaptation mainstreaming beyond the use of climate change language; firstly, adaptation measures were not mentioned or tailored deliberately as adaptation interventions but rather inferred as such when in actual fact they were business as usual

interventions. Besides the lack of a clear directive to mainstream, is the lack of clarity on what successful mainstreaming would look like (DEA, 2011). None of the Departmental SDBIPs reviewed contained a clear baseline, targets and indicators for mainstreaming, neither was there linkage to any of the IDP objectives. This can be attributed, to some extent, to the fact that South Africa still doesn't have an incumbent national adaptation M&E system that includes a component focusing on tracking progress in mainstreaming at all levels of government (DEA, 2017). It is justified therefore to state that climate change adaptation, in all three municipalities is done by default and not by design. Despite the allusions by some municipal officials to all the impressive interventions being done that can be deemed as adaptation a closer look at their SDBIPs reveal a gapping lack of deliberate planning at the technical level. Most of what departments call adaptation responses are more of applications of technological advancements or changes in techniques in their respective competencies which fall under best practice and less about responding to a contextualized vulnerability assessment. This is made apparent by the lack of consideration of the maladaptive aspects of such so called adaptation interventions and how they are not informed by a need to reduce vulnerability to climate change but more about scientific prowess and cost effectiveness. This observation was further given credence by responses from municipal officials to the question whether they were all aware and conversant with the objectives of the climate change adaptation deliverables in their respective departmental plans, 50% were undecided, 33% disagreed and only 17% felt they understood their department's adaptation objectives (Fig. 4.18). Clearly, there is a Lack of clarity on departmental adaptation mandate: scope of functions and responsibilities as this is not clearly spelt out in their respective departmental plans and by the statutory framework i.e. both the Municipal Structures and Systems Acts.

Figure 4.17: Level of Integration into Departmental Plans

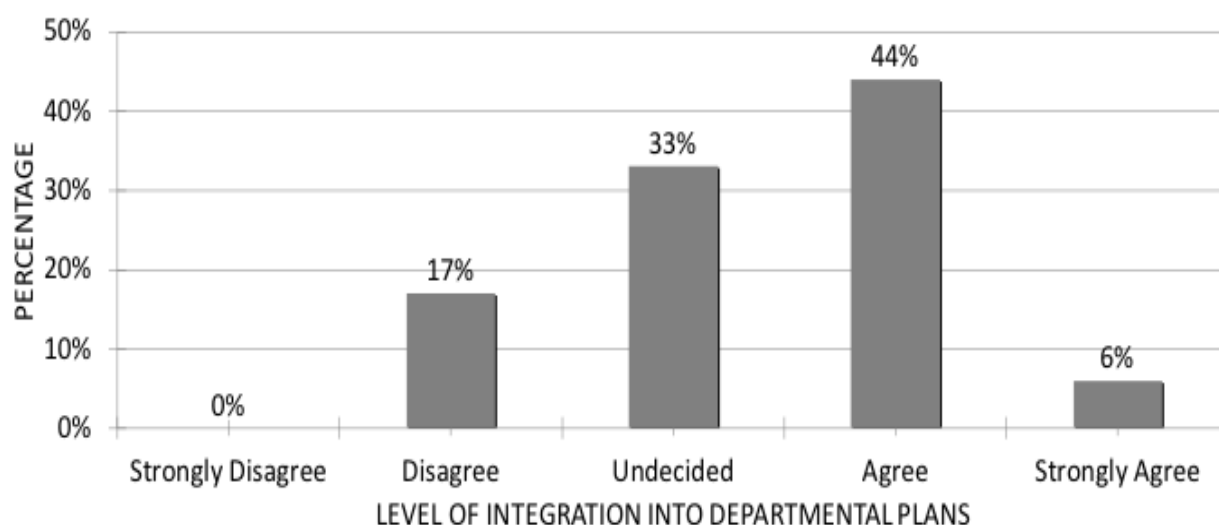
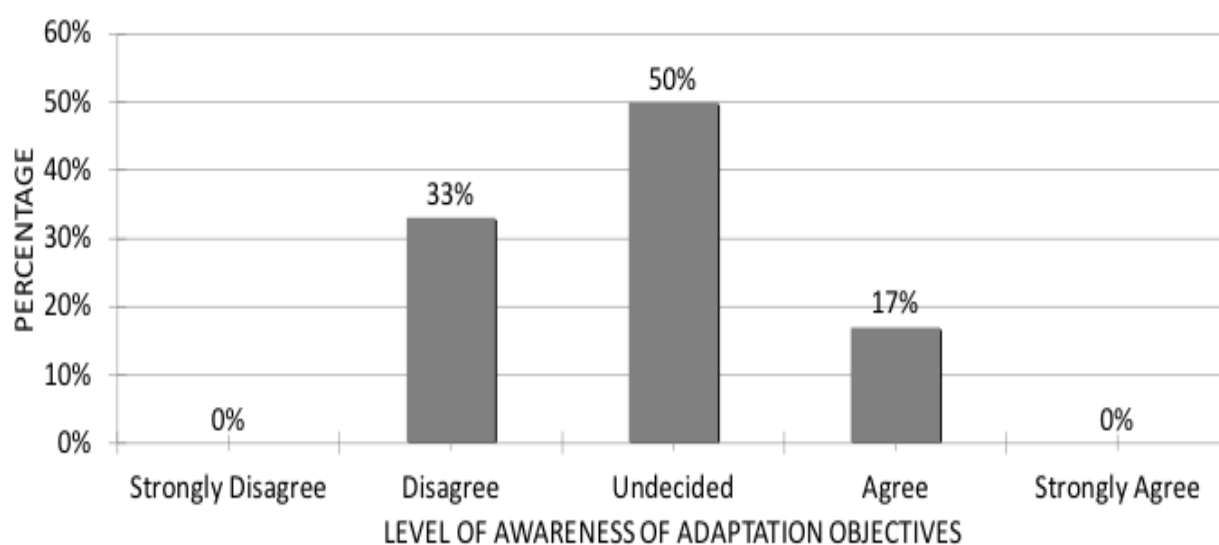


Figure 4.18: Level of Awareness of Adaptation Objectives



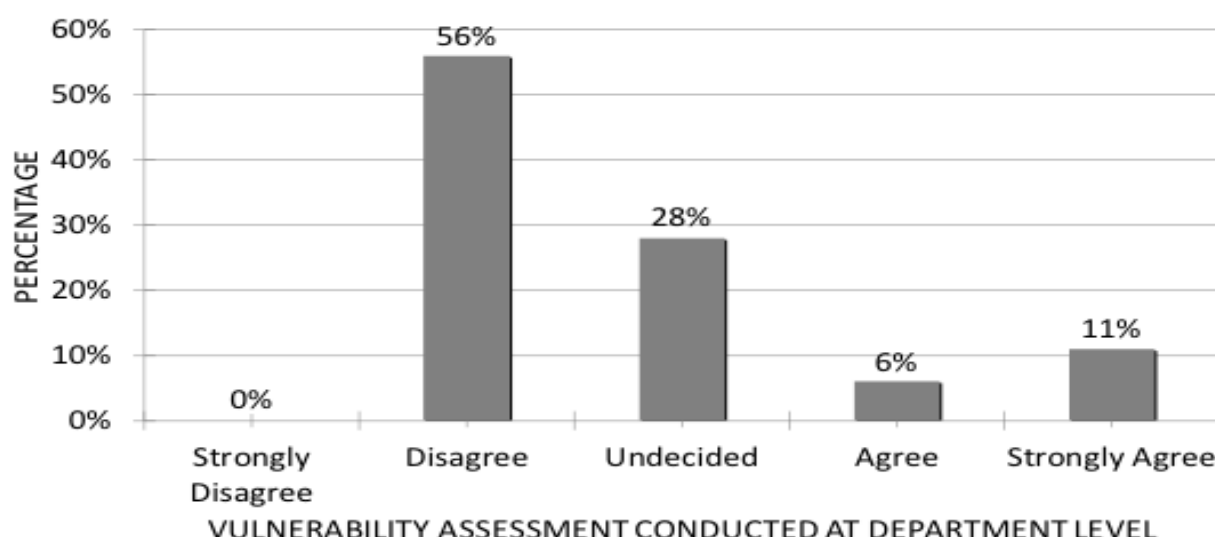
4.5.3. Sector Vulnerability Assessments

As an integral part and a prerequisite of adaptation planning, climate change impact assessments which include vulnerability assessments need to be conducted to

ascertain the baseline of possible future interventions (World Bank, 2010; UNDP, 2008). Respondents were therefore asked whether as a department they had conducted a climate change vulnerability and impact assessment of their sector and identified current and likely impacts of climate change, figure 4.19 below shows the results of the responses. A staggering 56% felt no assessments had been done, 28% were undecided and only 17% felt adequate assessments had been done. A review of department documents and follow up interviews confirmed that no assessments had been done at respective department levels as this was considered a department of environment core competence and that the departments lacked the funding to undertake such studies. A review of the respective climate change strategies shows that while there are commendable sections in these documents addressing vulnerability most of the data is inferred from provincial and National studies. For instance, the Climate Change Vulnerability Assessment for the Swartland municipal area was conducted as part of the Western Cape Government's Built Environment Support Programme (Swartland Municipality, 2013). There is little or no evidence of deliberate local investment by respective sector departments in conducting bottom-up community specific vulnerability assessments. Existing data is drawn from a wide range of related and unrelated sources, inevitably leading to inconsistencies (WCDM, 2014). However, a review of the Local Government Climate Change Support Program (LGCCSP) web page (<http://www.letsrespondtoolkit.org/>), which is led by the National Department of Environmental Affairs (DEA) reveals that a Climate Change Vulnerability Assessment and Response Plan was developed in October, 2017 by a consulting Company called Urban Earth through direct funding from DEA. The Climate Change Vulnerability Assessment and Response plan document is in its draft stages undergoing public comment at present- so it has not been implemented yet. A further analysis of the LGCCS programme is provided later on. In the case of the City of Cape Town, the vulnerability assessments contained in the CAPAs are mainly comprised of extrapolated information from provincial and national studies and were essentially desktop studies and not results of local participatory processes. The West Coast

District Municipality's Climate Change Response Framework document does acknowledge the lack of such localized assessment and recommends that "comprehensive local risk assessments will have to be conducted to allow for localized planning and contextual response strategies (WCDM, 2014).

Figure 4.19: Vulnerability Assessment Conducted at Departmental Level



4.5.4. Climate Change Champions

The need for a Climate Change focal person in each relevant department was also considered in the study as it ensures a dedicated Climate Change Champion to manage intradepartmental coordination of all adaptation mainstreaming as well as provide for easier interdepartmental or cross-sectoral integration (WCDM,2014). Figure 4.20 shows the findings when respondents were asked if their respective departments, with the exception of the Environment department, had a Climate champion, 53% of respondents were in disagreement while 35% were affirmative and 12% were undecided. Effectively 65% of respondents felt there was no focal person. Follow up interviews with each municipality revealed that in the Case of the City of Cape Town, which accounted for most of the affirmative 35%, the focal person alluded

to was the person in charge of drafting the CAPA so by de facto were considered Climate Change Champions. For Swartland Municipality, none of the departments have a focal person and neither does the local authority have a dedicated official in charge of climate change despite having a dedicated Environmental officer. The District Municipality on the other hand has a dedicated Environmental officer who doubles as the climate change champion in the environmental department but none of the other departments has a focal person. Finally, none of the three Municipalities has an IDP office endorsed climate change champion; so, there is no one in charge of adaptation mainstreaming, let alone climate Change, in the IDP offices.

So essentially none of the municipalities has a formalized system of climate Change adaptation focal persons working to mainstream adaptation concerns in each department and ensure that there is cross-sectoral coordination. Credence is provided to this conclusion by the responses received when officials were asked whether their respective departments belong to an inter-departmental committee on climate Change (figs.4.21 & 4.22). Figure 4.21 clearly indicates 67% of respondents were in disagreement (this figure includes 17% who were undecided) while 33% felt there was some sort of Interdepartmental coordination going on. A review of Figure 4.22 indicates that the 33% in figure 4.21 is from the West Coast District and City of Cape Town Municipalities which both have a dedicated Climate Change person in charge of adaptation however, follow up interviews revealed that, this does not mean there is a deliberate and well-resourced inter-departmental committee on Climate Change in either municipality. This makes the point that having a CAPA or a dedicated Climate Change person does not necessarily translate into mainstreaming (USAID, 2009, WCDM, 2014).

While the Environmental Resources Management (ERM) Department, in charge of Climate Change within the City of Cape Town (COCT) is well connected and enjoys the benefits of healthy networks nationally, the ERM department has failed to translate

its well-earned respect and reputation in the community of practice into tangible influence within the City of Cape Town. This is attributed to the fact that Environmental management and particularly Climate change is still being looked at as a Non-essential competence in terms of service delivery within the municipality and hence not accorded the required attention and respect (Lebel et al., 2012; Mokwena, 2009). The perception that climate change mainstreaming is a constraint to development priorities remains one of the main challenges facing climate change mainstreaming efforts (DEA, 2011; 2017). The very fact that none of the other departments view climate change as a priority for their sector their participation in any inter-departmental climate change committee is often viewed as an added burden to their core functions. Consequently, their participation in such structures, where they exist, is voluntary and departments often send junior or non-essential staff, with no decision-making powers, to attend such meetings. The other problem that is causing poor cross-sectoral coordination at the local level is institutional and legislative Fragmentation at the provincial and national levels. While the National Climate Change Response Paper advocates full alignment (both vertical and Horizontal) and suggests building of Performance Monitoring and Evaluation systems, in order to address the existing institutional and legislation fragmentation, compliance mechanisms have not been developed to ensure implementation (DEA, 2011). As part of the mainstreaming effort therefore, climate change will have to become an integral part of performance management systems for accounting officers at all subnational levels of government such as premiers, mayors, Municipal managers and executive directors in all municipalities.

Figure 4.20: Presence of Climate Change Champion (Focal Person) in each Department

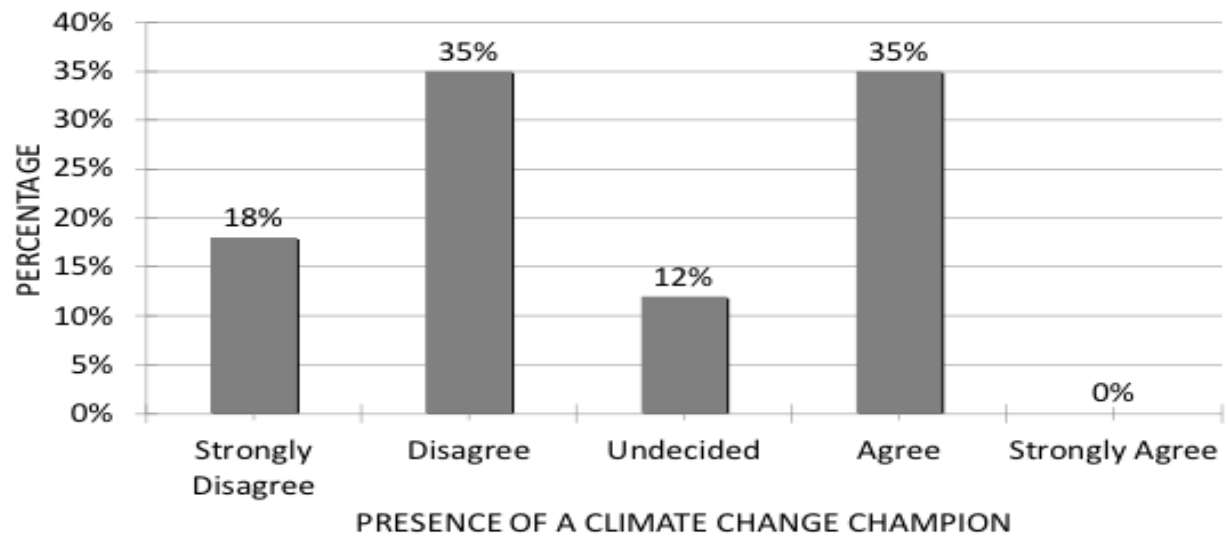


Figure 4.21: Presence of an Inter-Departmental Committee on Climate Change

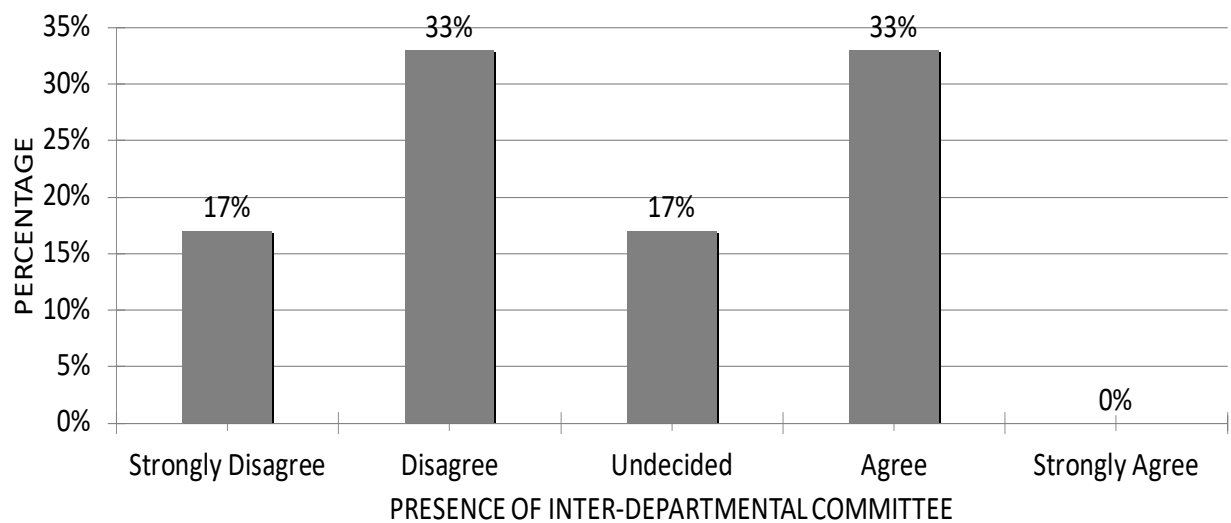
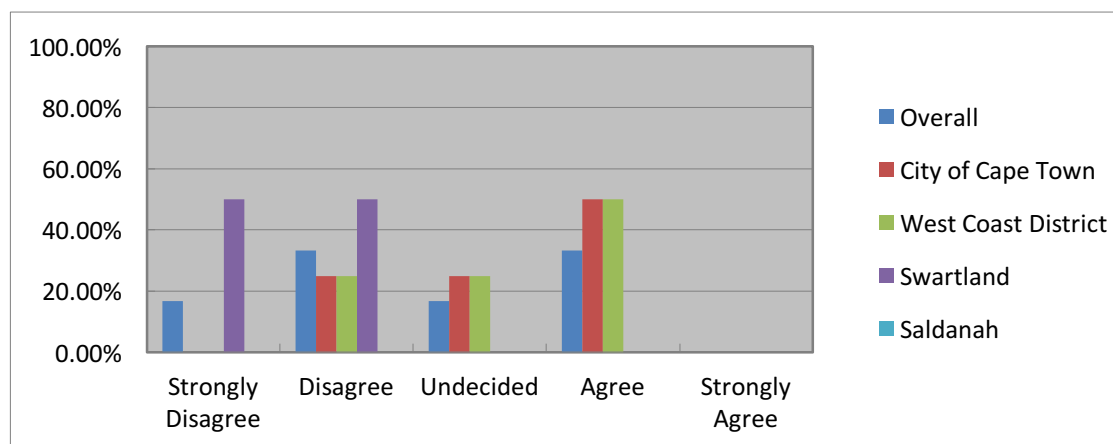


Figure 4.22: Presence of an inter-departmental committee on Climate Change per Municipality



4.5.5. Adaptation Finance and Manpower

One of the main aspects that ensure the success of mainstreaming is Climate Finance and especially if it is guaranteed by law from national fiscus and hence sustainable. With the knowledge of the lack of financial provisions from both national and provincial spheres of government, we asked officials in these municipalities if their current climate change related activities are adequately funded by their department budget, the responses, across all three municipalities, were indicative of the national trends i.e. erratic (see figs. 4.23, 4.24 and 4.25). Figure 4.23 shows that 62% of officials were in disagreement, 38% were undecided and none in agreement, so in essence Climate Change Adaptation is not distinctively funded as such . And when the same response data was collated according to Municipalities in Figure 4.24, it shows that in Swartland Local Municipality there isn't a climate Change budget neither does their corporate SDBIP indicate any climate Change integration; while as for the ERM department within COCT, funding to the department's adaptation work has been erratic and until 2013 the COCT did not have a dedicated Adaptation person due to lack of funds among other things. Therefore, funding is still currently a major hindering factor; a lot of initiative, such as mainstreaming, would have been realized had required funds

been made available timeously and from the Municipal budget. The west Coast District municipality has funding constraints for even mundane environmental management functions let alone Climate change functions. Currently the district Municipality is unable to provide the needed technical and operational assistance, in terms of Climate Change, to the five local municipalities under its jurisdiction mainly due to lack of capacity and resource constraints (WCDM, 2014). Furthermore, mainstreaming should not only concern itself with resource allocation but also the effective management of assigned resources; to ensure that funds raised are disbursed for the intended use and within planned time frames(WCG,2013). Therefore, Laws such as the Municipal Finance Management Act (MFMA) and the Public Finance Management Act (PFMA) should be streamlined in order to facilitate the implementation of mainstreaming activities and subsequent projects (WCG, 2013). These laws currently pose serious challenges in the form of delays in decision making due to meeting regulatory and supply chain requirements as well as formation of partnerships that seem to put municipalities at risk as compared to business as usual projects (WCG,2013). As a result of the cross-sectoral nature of Climate change and that it's a novel field to established government systems, climate change projects demand a lot of innovation and flexibilities that are currently outside the scope of incumbent supply chain management guidelines e.g. type of partnerships with both private and civil society organisations.

A look at figures 4.25 and 4.26 below substantiates the notion that there is a serious lack of capacity in terms of human capital (warm bodies) in most municipalities in South Africa. When respondents were asked if their departments were adequately resourced in Figure 4.25, 73% of respondents felt that their municipalities were under staffed in as far as Climate Change adaptation is concerned, 22% were undecided and only 6% felt there was adequate staffing. A comparison of the three Municipalities in figure 4.26 shows that both the Swartland municipality's Climate Change consultation document and the West Coast District Climate Change response

framework allude to the fact that there is a grave lack of capacity to effectively manage climate responses in the two municipalities. Consequently, based on the current status quo climate change response management actions remain reactionary or response driven and often uncoordinated within the WCDM and local municipalities (WCDM, 2014).

Figure 4.23: Climate Change Adaptation funded from Departmental Budgets

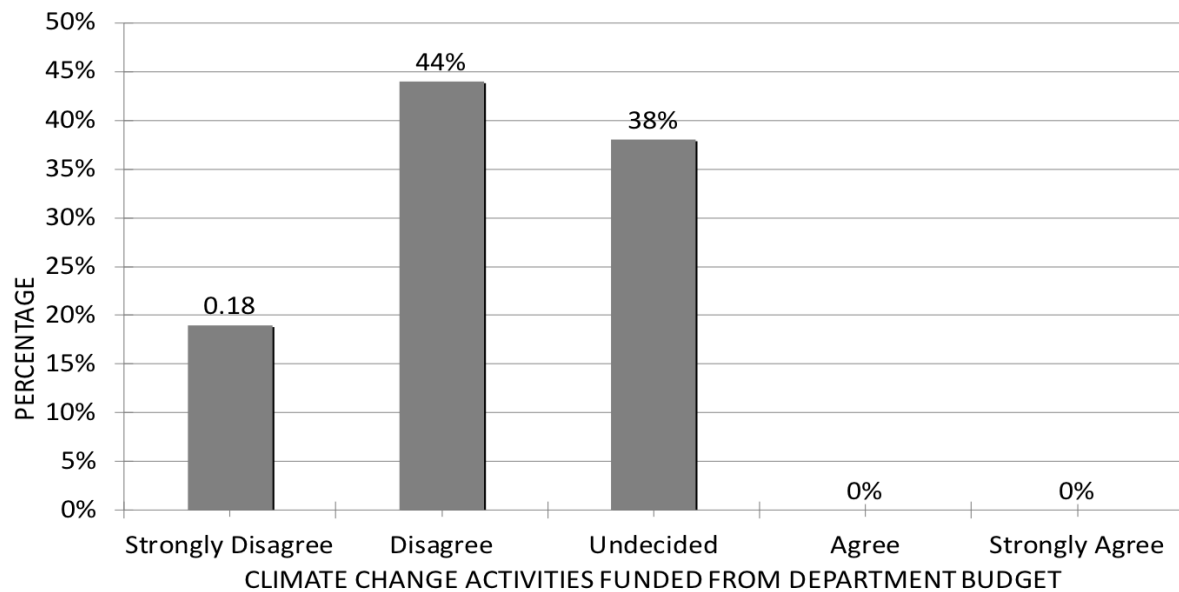


Figure 4.24: Climate change adaptation funded from departmental Budgets per Municipality

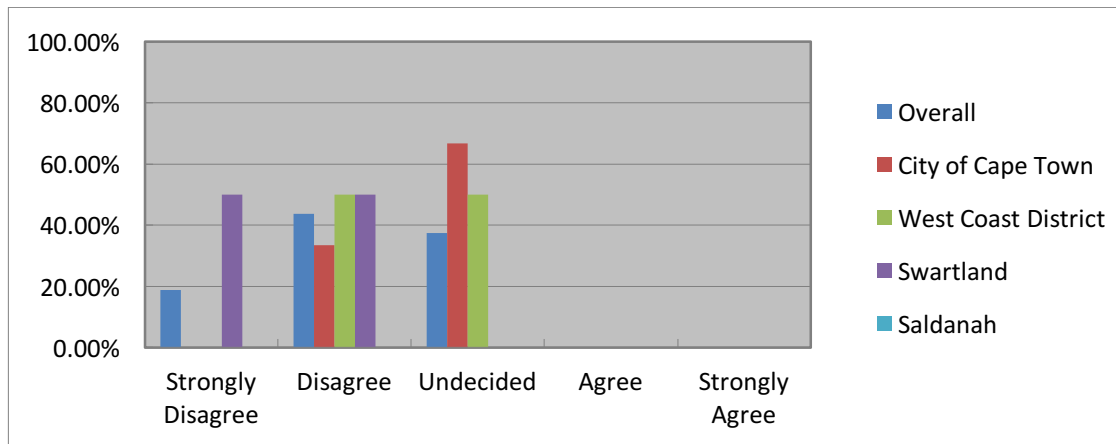


Figure 4.25: Climate Change Related Activities are Adequately Resourced in Terms of Manpower

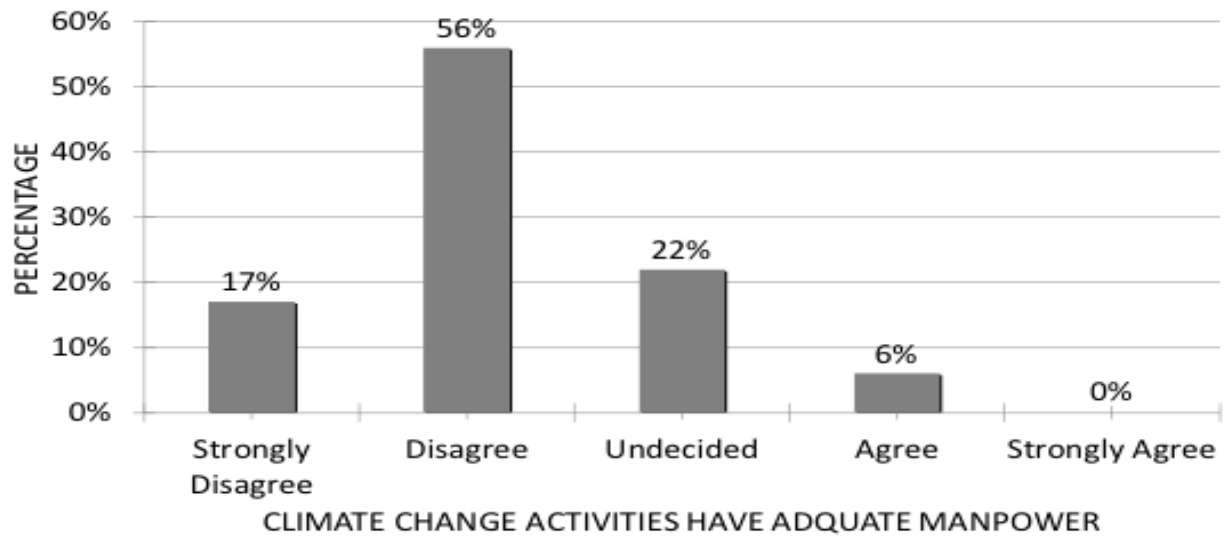
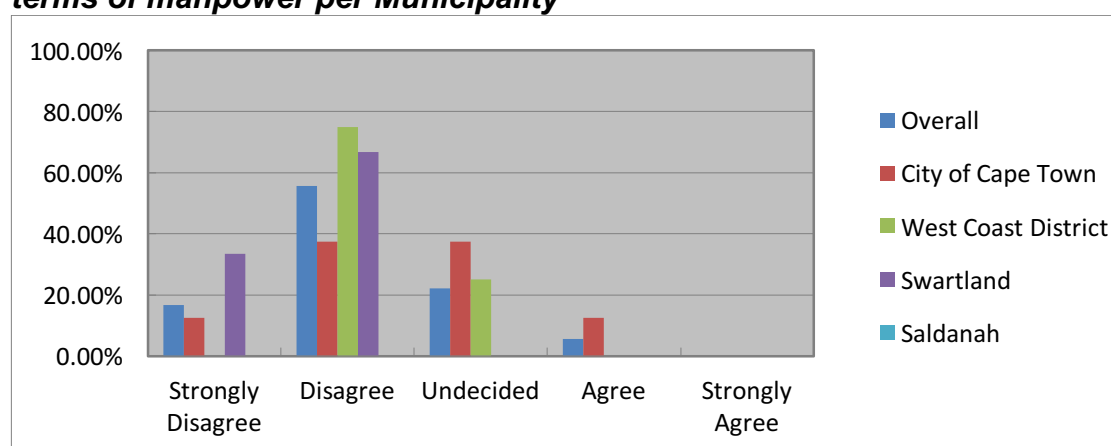


Figure 4.26: climate change related activities are adequately resourced in terms of manpower per Municipality



4.5.6. Conclusion and Relevance to Research Questions

This section further substantiates the conclusions and linkages to research questions made in section 4.4 which speaks to the factors hampering the process of mainstreaming. However, it goes further and highlights the emerging institutions from this process of mainstreaming thus speaking to sub-question three which asks; The outcome of Institutional change: is the emerging institution a reflection of the isomorphic. If put in other words it asks is section 10.2.6 of the National climate Change response policy being followed to the later and is it producing the intended institutions? The study results in this section show that Institutional Fragmentation and lack of coordination among the various departments within each respective municipality remains a significant hurdle and a barrier to successfully integrated climate governance (Müller, 2008). While CAPAs and other strategic climate change documents have been drafted none of their recommendations have been incorporated into the respective departmental plans leaving all three municipalities in a dichotomous position-a disjuncture between stated aspirations and actual work being done. There are no adaptation systems in place, no resources allocation-both fiscal and human capital and no streamlining of the organization hierarchy has been done to achieve identified and documented adaptation interventions on a sustained basis. Its business

as usual and there is a reactional approach to adaptation work by way of emergency responses.

4.6 ORGANISATIONAL CULTURE

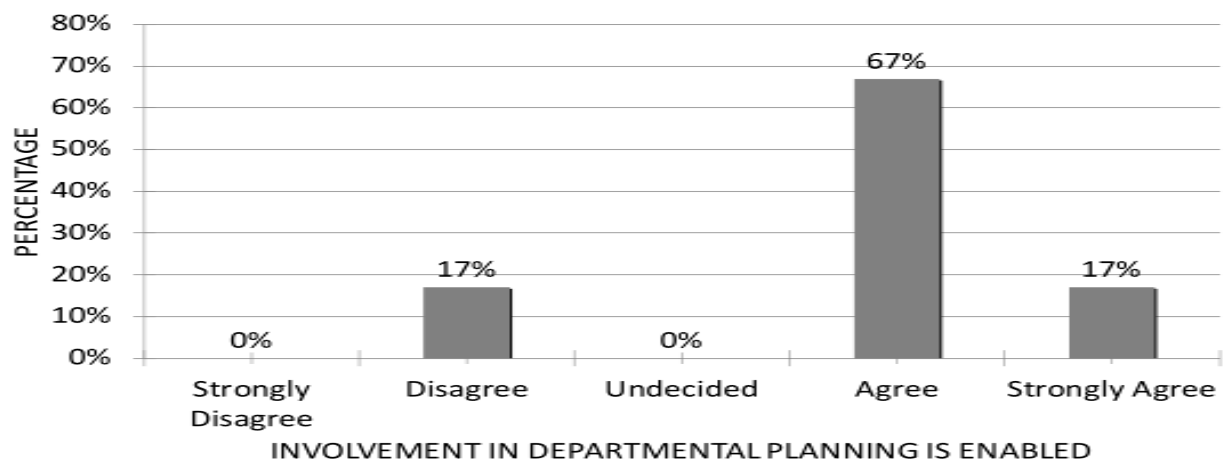
One of the research questions that this study set out to address was to assess the cultural fabric of these three Municipalities from an institutional theory perspective with particular emphasis on how change is managed. While cognizance is made of the fact that the locus of the stimuli for change can both be internal and external, the particular focus of this study is with the externally induced change-in this case the nationally driven climate change response policy. Scholars such as Cho et al, (2005), Mazmanian and Sabatier (1983) argue that the nature of work culture embraced or cultivated in any organization determines how change is received and dealt with. Therefore, an understanding of the organizational culture would help in answering questions as to why, how and when change is happening or not. In this case the aim is to understand how organizational culture has had a bearing on how change, in general, is managed across all three municipalities and particularly the rate of uptake of Climate response strategies as outlined by the National Climate Change Response White Paper (NCCRP). As in the previous section respondents were asked a number of leading questions as part of the electronic survey and then follow-up interviews were conducted.

4.6.1. Culture of Enabled involvement

Respondents were asked if everyone is involved in open and robust discussion regarding key strategic issues in order to assess whether there was a *culture of enabled involvement*. In essence, overall participation in discussions around department strategic planning is mandatory and all levels of the department hierarchy are involved. Therefore, it can be confidently inferred that there is a culture of collective planning across all three municipalities; systems and processes are in place to encourage overall participation. Figure 4.27 below shows that 84% of respondents

agree that there is ample involvement of everyone in their respective departments' planning process. Meanwhile, 78% of respondents believe their respective departments have leaders who are passionate and positive in the way in which they manage and communicate strategy, while 17% disagree and the rest are undecided. Therefore, based on the raw survey data it is clear that overall involvement is encouraged and is driven by strong and passionate leadership that effectively communicates strategy. However, this is no guarantee that involvement in planning process does actually result in everyone's views being taken into consideration? Discussions with lower tier staff (street level Bureaucrats) revealed that while leaders encourage feedback from lower levels (on paper), in real terms their contributions are not always heard and in most cases, there is a top down approach in planning influenced mostly by the political agenda of the incumbent political party. Therefore, strategy across all three municipalities is strongly influenced by politicians and is often aligned with the ruling party's manifesto. Politics therefore also plays a major role in determining policy and strategy at the local government level. While political oversight is an essential element of local governance, the current emphasis by the Auditor General's office and the Democratic Alliance (DA) party on clean audits has had one unintended outcome of inducing a culture of risk averse and conservative mind-sets characterized by bare minimal compliance which blocks innovation and risk-taking behaviour for fear of reparations (WCG, 2013).

Figure 4.27: Enabled Involvement in Departmental Planning

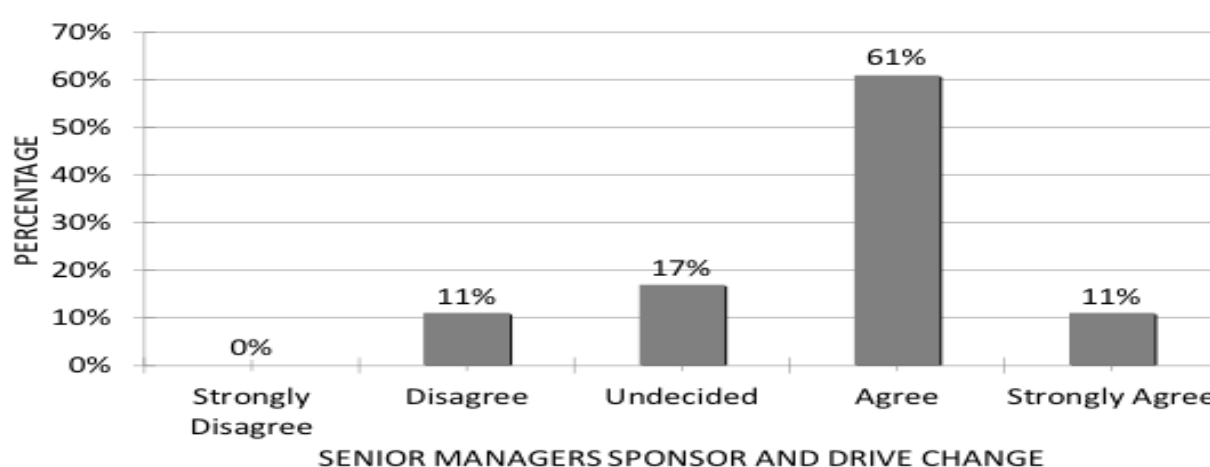


4.6.2. Senior management Sponsor and Drive Change

In terms of change management overall, results show that senior managers sponsor and drive change regardless of whether it's in response to political directives or innovative ideas of a technical nature developed endogenously or is copied from elsewhere as best practice. Whatever the case, senior managers are tasked with driving and managing change both from a structural and systems perspective. Figure 4.28 shows that 72% of respondents intimated the fact that senior managers manage change, 17% were undecided while 11% disagreed. However, follow up discussions with various municipal staff revealed that that no change occurs in any of the municipals without the endorsement of the political superiors; in cases where change is induced by technical reasons or best practice senior management often have to convince politicians by way of motivation either through reports and/or presentations to either portfolio committees and the full municipal council. The latter being the highest decision-making body in any municipality and it is not always guaranteed that the approval being sort by senior managers will be granted by their political heads. Therefore, the buck stops with the politicians. This highlighted the need for the Climate Change function to be housed in a politically powerful department with sufficient

leverage to commandeer the adoption of climate concerns into departmental plans. During follow up interviews, the central role of the mayoral office was strongly suggested for the City of Cape Town while the Municipal Manager's office was suggested for both the district and Local Municipalities. The latter highlights the need to place the adaptation function in the office of a climate Change champion who does not necessarily have to be a politician but has to have a very senior position; retain sufficient administrative and political influence as well as charisma.

Figure 4.28: Senior Managers Sponsor and Drive Change



4.6.3. Senior Managers Communicate and Manage Change

Within each department, senior managers have to clearly communicate the reasons for change in a way that is understood by all department staff. Results show that 71% of respondents feel that this is often done adequately, 24% are undecided and 6% disagree. In the same vein, 73% believe within their respective departments, plans are developed to manage change, 22% are undecided and 5% disagree. In essence, this means there are often clear plans put in place to manage and guide the transition to the desired goal. Follow up interviews however, indicated that while change management plans are usually put in place and well communicated, the desired

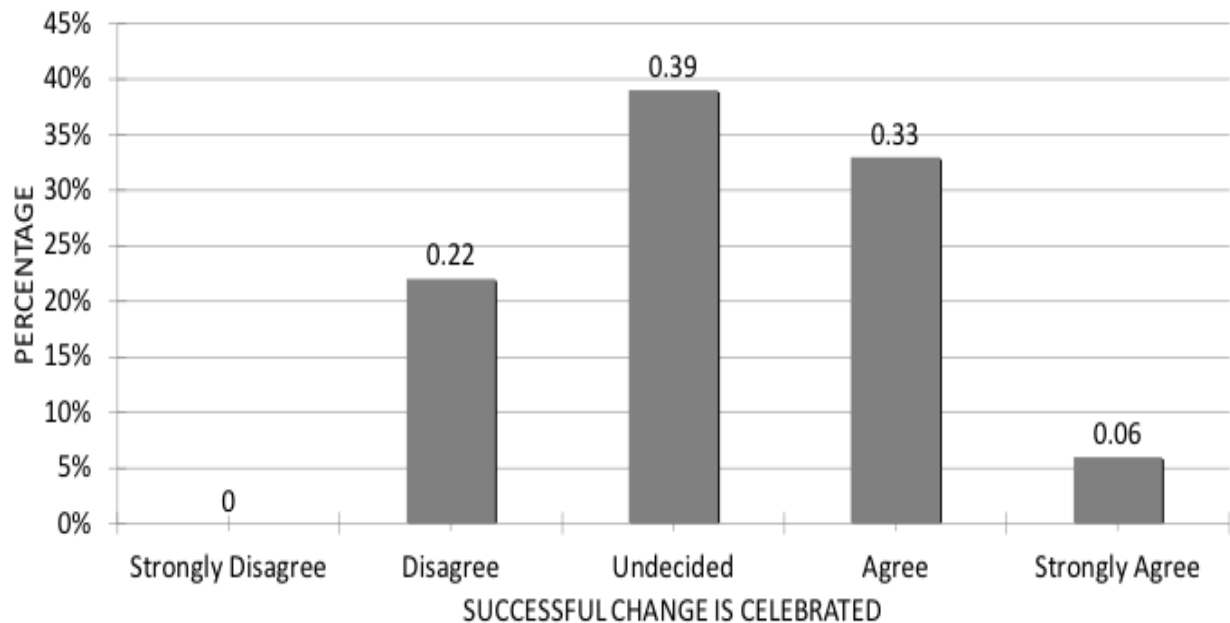
outcome is often not realized in the manner that it is envisaged and in some cases, there are delays. The main reasons cited for poor results and delays are conflict of interests, structural inadequacies in terms of capacity and availability of resources to finance both the transition and the end state.

In response to the question whether deliberate actions are taken to prepare employees to deal with and manage change, figure 4.29 shows that, 67% were in agreement, 28% were undecided and 5% disagreed. This indicates that change management is a well-established and practiced aspect of organisational management so the lack of it is not per se the cause of the slow uptake of Adaptation mainstreaming. Furthermore, Figure 4.30 below shows the results of responses to the question whether within their respective departments successful change is celebrated; 39% responded in the affirmative; 39% were undecided while 22% disagreed.

Figure 4.29: Employees are prepared to Deal with and Manage Change



Figure 4.30: Successful Change is celebrated



In essence, figure 4.30 shows that change is often received with mixed feelings and in most cases the sentiments are negative towards a change of the status quo. The reasons cited for this resistance to change include; often staff need to be reskilled, threatens job security and at times results in displacement or mobility of staff due to structural changes. Emphasis therefore has to be placed on addressing and clearing the air on all staff concerns as highlighted above in order to ensure the success of any mainstreaming effort.

4.6.4. Conclusion and Relevance to Research Questions

In summary, the research found that all three municipalities have a culture which reflects a focus on rules and regulations, with little flexibility (Bradley et al, 2001). According to Denison and Spreitzer (1991) this is a culture commonly referred to as a hierarchical Culture, because it emphasizes the enforcement of rules, conformity from the top and attention to technical matters. Also referred to as the internal process

model, it's the traditional theoretical model of bureaucracy and public administration that relies on formal rules and procedures as control mechanisms (Weber, 1948; Zammuto, Gifford, & Goodman, 1999) and the locus of power is with the politicians and their politically appointed senior management staff. This section of the study speaks to sub-question 2 on the process of mainstreaming; it clearly shows the conflicts of interest that exist between the municipal officials (street bureaucrats), who are willing to mainstream climate change Adaptation if provided with the necessary tools and funding but are hampered by decisions made by their political superiors. While it would be imprudent to say politicians don't appreciate the urgency of climate change it is justified to say not as much as getting re-elected. They will therefore prioritize any actions that address the most pressing needs of their electorates and if climate Change is not one of them the likelihood of it being adequately financed is close to zero. Unfortunately this is usually the case, most communities with the exception of cities such as Cape Town due to the on-going drought there, do not consider climate change a bread and butter issue and hence is often missing from the IDP wish lists.

As a result, municipal employees spoken to during the study expressed preference for greater flexibility and more autonomy in certain decision-making processes not only for the ease of decision making but to allow for learning and innovation-out of the box solutions, than currently exists within their respective organizations.

4.7 INTERGOVERNMENTAL RELATIONS

According to Van Metre and Van Horn (1975), the policy implementation phase does not commence until government has ensured that the bureaucratic systems in terms of operational policies and structural arrangements in terms of intergovernmental relations are in place. It was therefore imperative as part of this study to assess the level of intergovernmental cooperation vis-à-vis climate Change adaptation mainstreaming.

4.7.1. Level of awareness of Climate Change Policy and Legislation

When asked if they were aware of the policy and legislative framework on climate change adaptation in South Africa, the results in figure 4.31, a total of 59% of municipal officials across all three municipalities are not conversant with the current and developing policy and Legislative framework in the country. During follow-up interviews municipal staff were asked if climate change imperatives as outlined by the National Climate Change Response White Paper (NCCRP) had been effectively communicated by senior management, particularly the one on mainstreaming the generic response was negative. Meanwhile, the City of Cape Town's Climate strategy, The WCDM's Climate Response Framework and the Swartland local Municipality's Climate Change consultation document have all made mention of the National policy requirement to include Climate change considerations in IDP processes. One official argued, however, that these documents are often drafted by consultants and in most cases not read by municipal officials and even when read there is very little leverage to actualize their contents at the present moment due to other pressing needs. Clearly while there is some level of knowledge of the national policy requirements these developments have not been adequately communicated at the local tiers of government simply because it's not prioritized (WCDM, 2014). A more aggressive approach will have to be adopted at all spheres of government and adequate incentives put in place to stimulate the uptake of mainstreaming. One official spoken to suggested mainstreaming work be linked to municipal staff's performance management processes and staff members be rewarded for championing climate change work.

Figure 4.31: Awareness of Policy and Legislative Framework

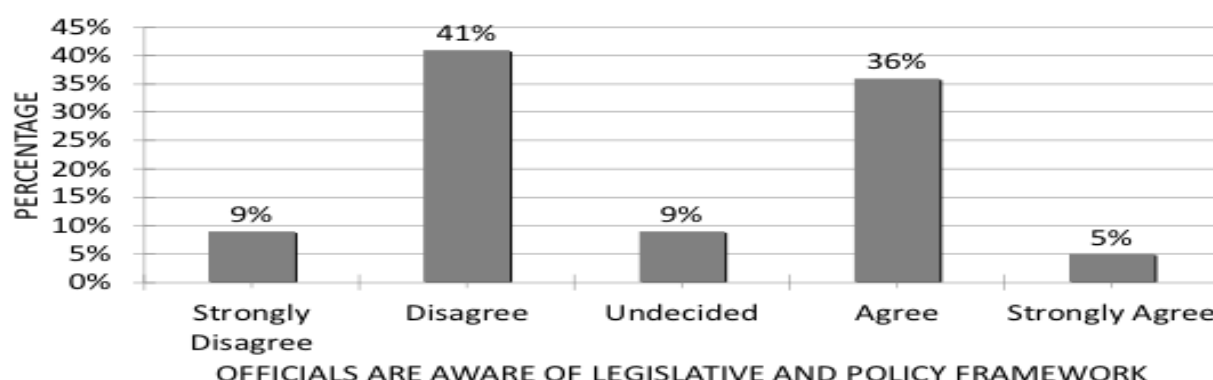
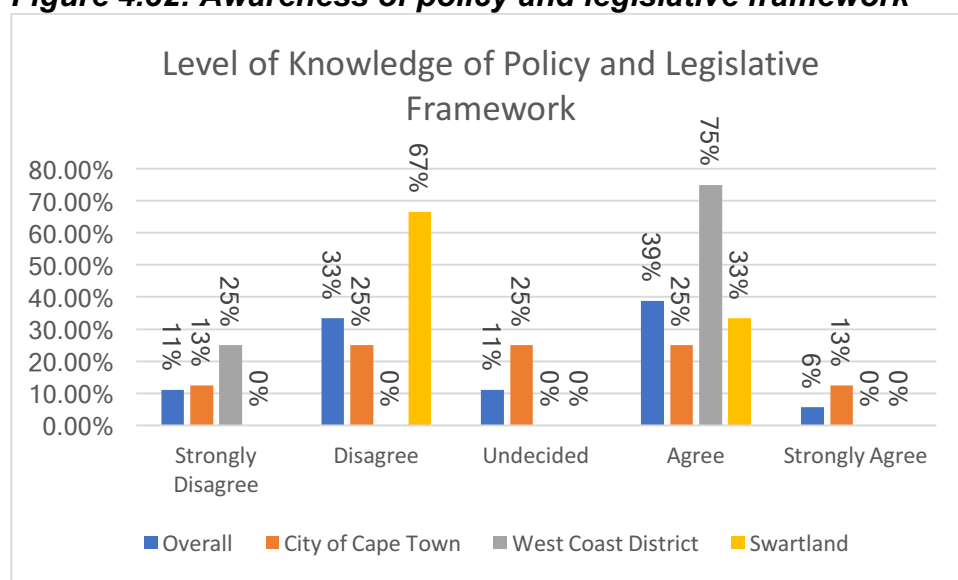


Figure 4.32: Awareness of policy and legislative framework



4.7.2. Level of interaction with the “Lets respond guide and Toolkit

The national Department of Environmental affairs in conjunction with GIZ developed in 2012 the “Lets respond guide and Toolkit”, as part of the Local Government Climate Change Support Program (LGCCSP), which aims to assist district and local municipal governments to better respond to climate change (GIZ,2017). The main priority of this toolkit and in line with NCCRP is to prioritize the mainstreaming of climate change

considerations and responses into all relevant sector, national, provincial and local planning regimes such as the Integrated Development Plans (DEA, 2012). To date a considerable amount of resources has been spent on rolling out this programme in municipalities across the country as the government's flagship programme in adaptation mainstreaming. It was therefore prudent to ask the municipalities under study what level of interaction they had with this resource, figure 4.33 below paints a picture of the state of affairs, 61% of officials have not had any interaction with the toolkit, 22% were undecided and only 17% have interacted with it. These figures are indicative of a low uptake of this mainstreaming instrument at the local levels and the explanation provided is because both the City of Cape Town and the Swartland Municipalities are not part of the Local Government Climate Change Support Program (LGCCSP) while the west Coast District Municipality was designated at the beginning of 2017 as one of the district municipalities in Phase 3 of the programme. However, it was only until fourth quarter of the year that the Climate Change Vulnerability Assessment and Response Plan was developed. It is the latter's involvement in the LGCCSP that explains the high number of respondents from the district municipality that have interacted with the toolkit in Figure 4.34. This does not mean that any mainstreaming work has been done across the municipality; the LGCCSP intervention is still in its assessment phase and implementation will commence once the strategy and action plan has been approved by council.

Figure 4.33: Interacted With the "Let's Respond Tool Kit"

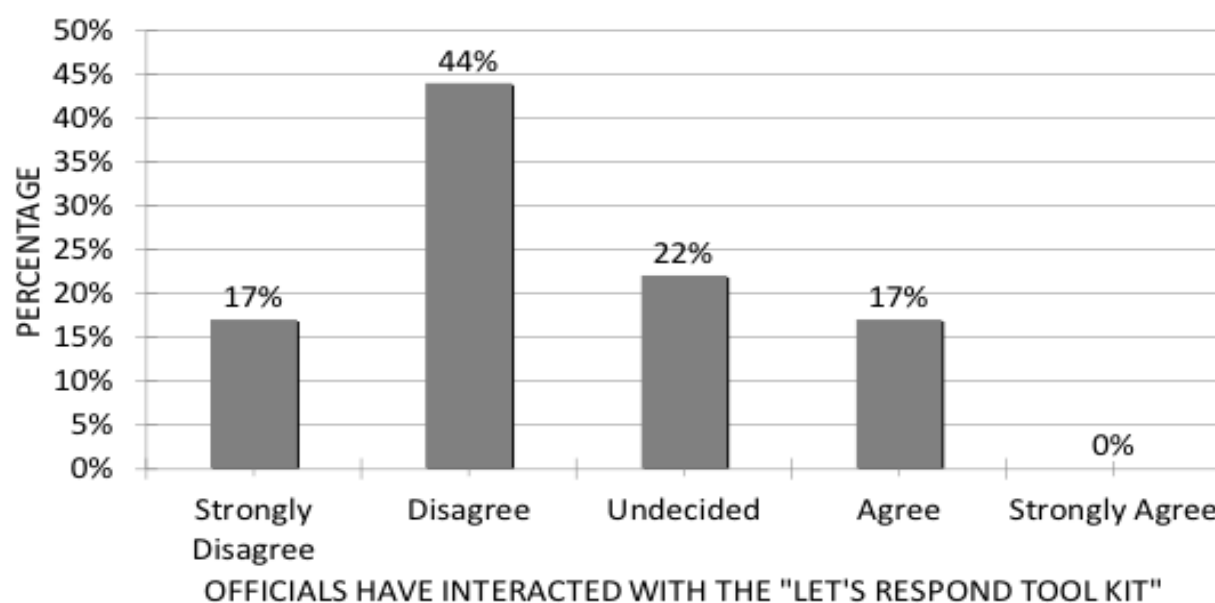
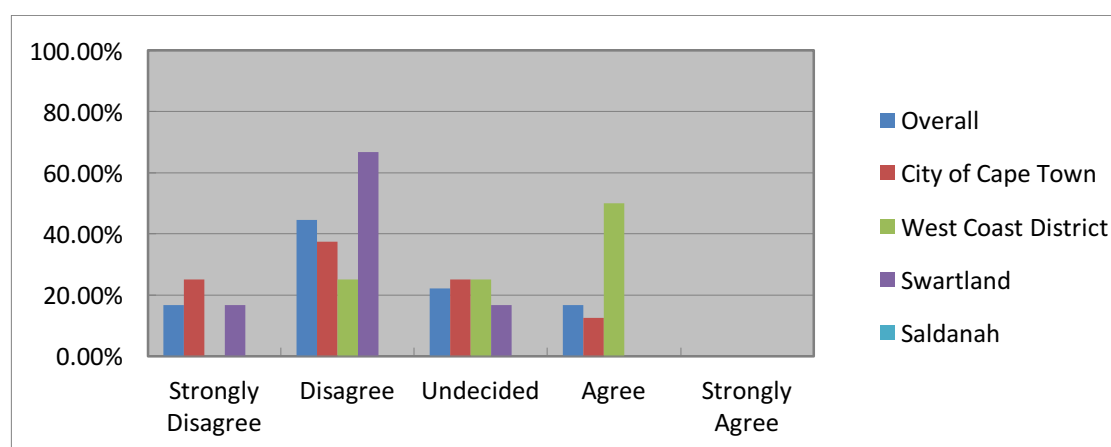


Figure 4.34: interacted with the let's respond Tool kit per Municipality



4.7.3. Level of clarity of Municipal mandate on Climate Change

When asked whether there is ample clarity on the mandate of Municipalities concerning Climate Change mainstreaming from national Department of Co-operative

Governance and DEA, figure 4.35 shows 39% disagreed majority of which are from Swartland Municipality, 33% were undecided while 22% felt there was clarity-50% of which were from the district municipality. About 6%, all from the city of Cape Town strongly agreed. From the results, it seems there is more clarity on the climate mandate at the metro and district levels than there is at the local levels-awareness has not trickled through to the lower local levels. Figure 4.36 shows the highest awareness among respondents from the district Municipality and lowest from the local Municipality. Follow up interviews also revealed a general sentiment among all three municipalities of patronage from national government departments that fail to appreciate the intricacies and magnitude of their work by placing, at times unrealistic, demands and expectations while providing little or no technical and fiscal support.

Figure 4.35: Sufficient Clarity on Municipal Mandate

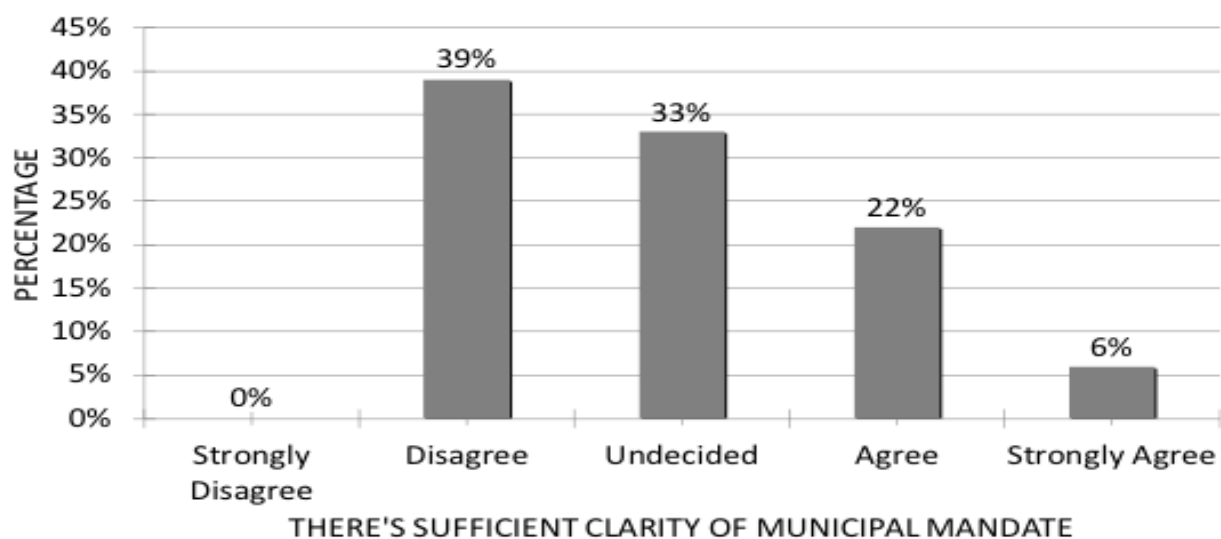
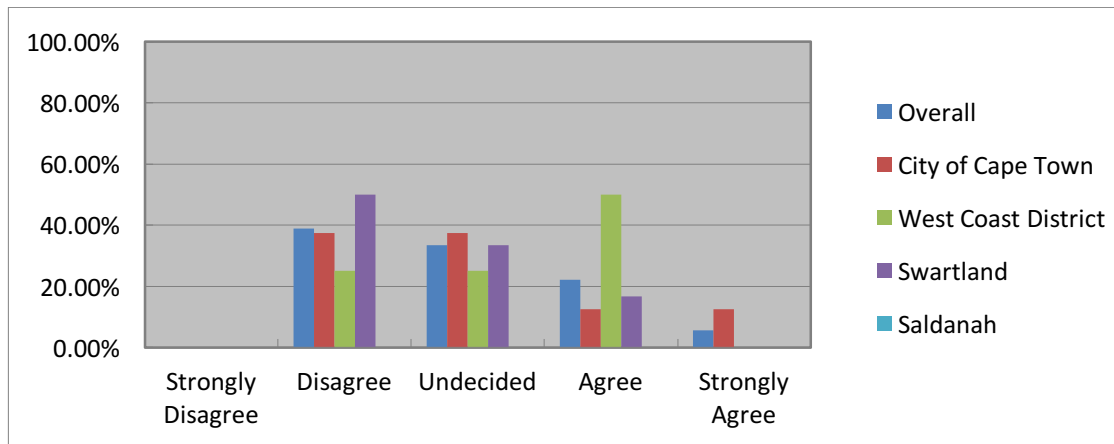


Figure 4.36: Sufficient clarity on the mandate of Municipalities (per municipality)



4.7.4. Sufficient interaction with Provincial and National Spheres

In the same vein, when asked whether there is sufficient communication from on Climate Change mainstreaming objectives and processes from provincial and national governments, the results in Figure 4.37 show a similar trend to those observed in Figure 4.35 i.e. there isn't ample intergovernmental alignment with or devolution of the adaptation function to the local government level. A closer look on Figure 4.38 indicates the district Municipality to be enjoying better communication from both provincial and National spheres than both the metro and local municipalities. This could also only be attributed to the district Municipality's involvement in the LGCCSP.

Figure 4.37: Interaction with Provincial and National Governments

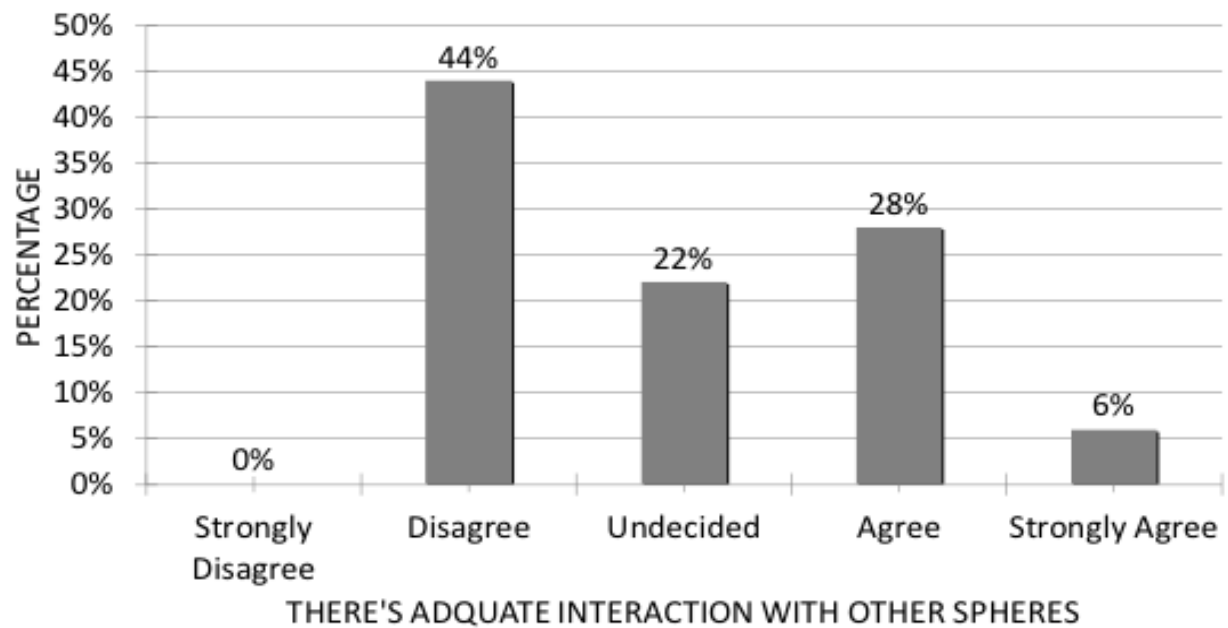
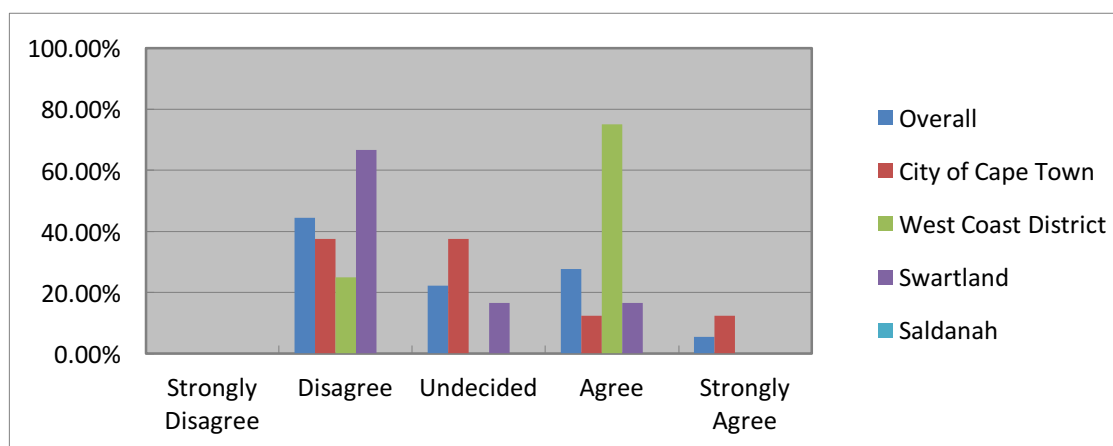


Figure 4.38: Interaction with provincial and national governments per Municipality



4.7.5. Funding Support from Provincial and National

Following the popular adage that “only that which gets funded gets done” respondents were asked if there is adequate fiscal support from National Treasury for climate change projects; what is remarkable in figure 4.39 is the level of indecision on this topic among senior management staff at 56%; 34% disagreed and 11% felt there was ample support. This finding is substantiated by the fact that Climate Change is an unfunded mandate in South Africa. A closer look at figure 4.40 however shows where the greatest indecision lies (COCT) and a continuation of a similar trend observed above where the district Municipality seems to enjoy better attention than the other Municipalities. This aspect can also be attributed to the fact that most national departments often regard Metros as more financially stable, due to a wider revenue base than the district and local municipalities (FFC, 2015) hence most support is channelled to the lower tier municipalities. Despite the variations observed here there is one aspect that is consistent across all municipalities and that is there is no dedicated funding for climate change from Treasury through the equitable share system that comes to any of the municipalities. All the funding currently received through programmes such as the LGCCSP and other provincial projects.

Figure 4.39: Adequate Fiscal Support from National Treasury for Climate Change

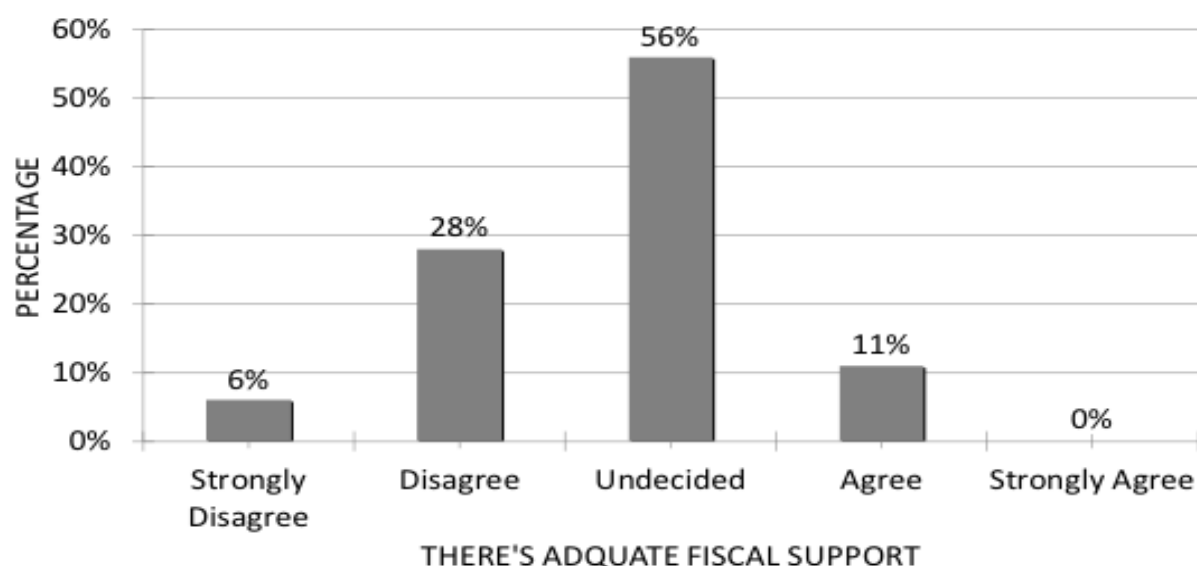
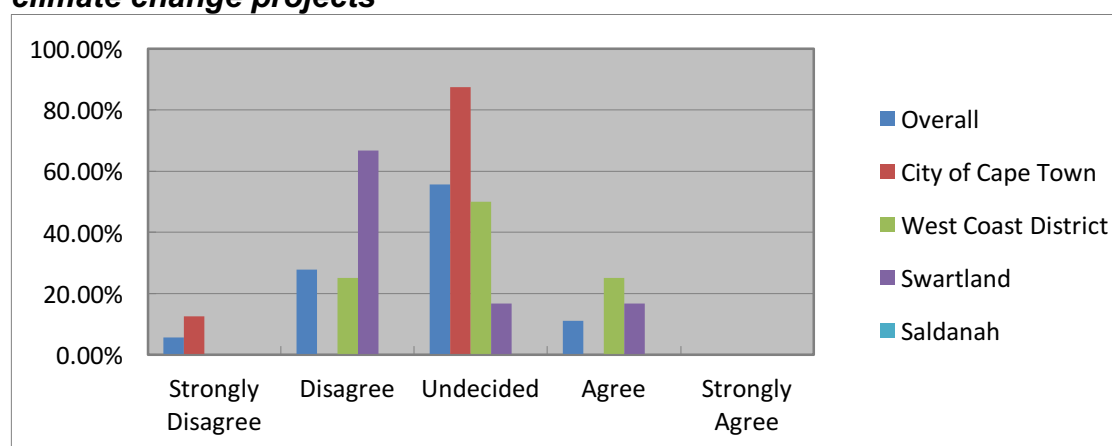


Figure 4.40: There is adequate fiscal support from National Treasury for climate change projects



4.7.6. Level of Technical Support from Province

In assessing whether provincial government provides any support to the respective municipalities figures 4.41 and 4.42 shows the responses to the question whether provincial government provides any technical support. I figure 4.42, the district Municipality seem to again enjoy more support than either of the other municipality. What needs to be noted at this stage however, is that since the Swartland Municipality

falls under the West Coast District Municipality the general sense among Swartland Municipal officials that neither national nor provincial spheres are providing ample support is a reflection of the failure by the district to translate the support its receiving to local municipalities under its jurisdiction.

Figure 4.41: Adequate Technical Support from Provincial Government in Terms of Climate Response Strategies

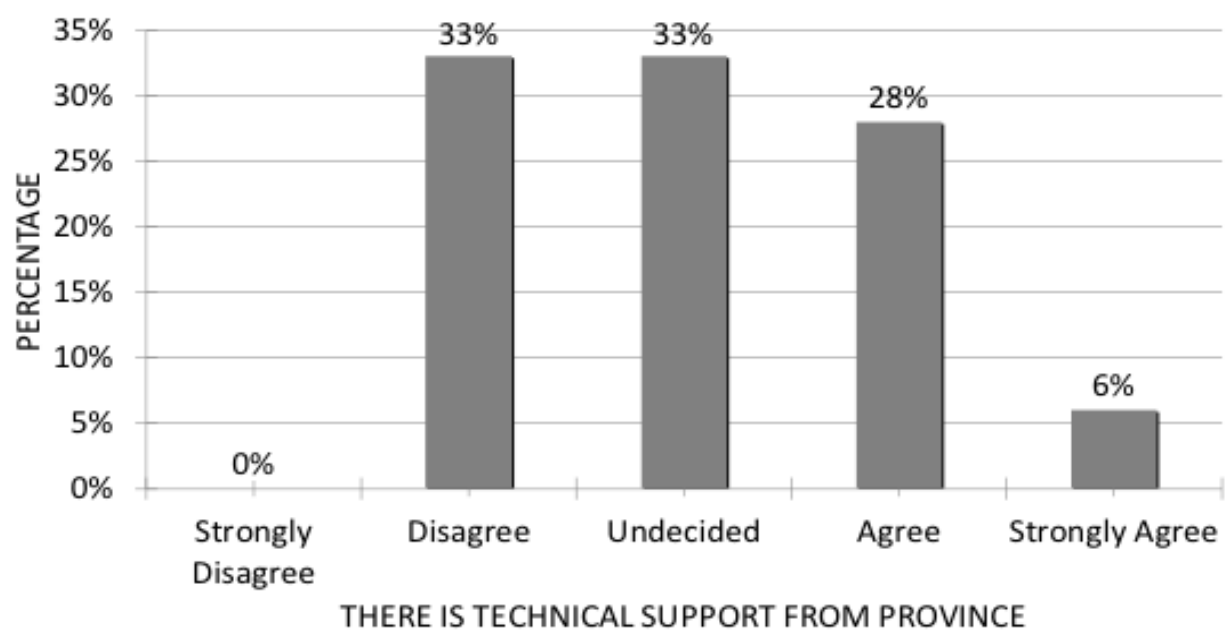
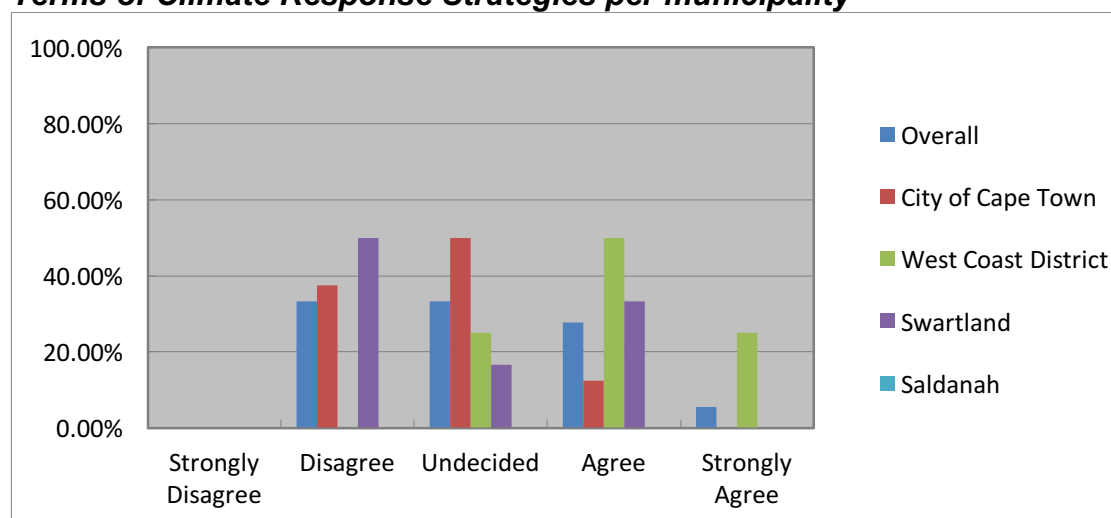


Figure 4.42: Adequate Technical Support from Provincial Government in Terms of Climate Response Strategies per municipality



4.7.7 Conclusion and Relevance to Research Questions

This section responds to sub-question three is climate change mainstreaming as it is being undertaken now producing institutions reflective of the tenets of section 10.2.6 of the national climate Change policy? In response, it is prudent to note that outside of the Local Government Climate Change Support Program (LGCCSP), fiscal support is erratic, intergovernmental coordination is fragmented and technical support is inconsistent. There has also been concerns raised concerning the use of a project approach and the employ of external Consultants in the roll out of the LGCCSP for two main reasons. Firstly, because a project by definition is an intervention that has be done within a stipulated time frame and budget while mainstreaming will require a long term approach with open ended timeframes characterized by sustained follow up support for Municipalities with weaker institutional capacities. Secondly, the use of consultants is not only costly but fosters a culture of dependence by government officials on consultants instead of developing in-house capacity. Looked at from another perspective, the current trend of using consultants is indicative of a recognized lack of internal capacity at both national and provincial levels. By design the end goal of any mainstreaming intervention, in the public sector, is to build and retain internal

technical capacity to climate proof any existing or emerging sustainable development agenda item by government officials themselves. It is therefore hoped that these initial phases of the LGCCSP will pave way for an established government function, funded from either National fiscus or foreign assistance, through the equitable share system, characterized by a climate champion in each national, provincial and municipal department whose sole responsibility will be to mainstream climate change.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

A major point of despatcher in an attempt at understanding why mainstreaming is not yet universally and effectively happening across all municipalities is to acknowledge that the South African climate change policy and legislative framework is in its infancy and in transition-hence still developing since the publication of the NCCRP in 2011. It is characterized by institutional fragmentation or in precise terms Sectoral fragmentation of institutional responsibility where most of the institutions with mandates to deal with climate Change adaptation mainstreaming tend to be independent, fragmented and working to relatively narrow mandates with closed decision processes (UIA, 2002², Müller, 2008) Besides causing inadequate coordination within the intergovernmental system; this fragmented approach, at the local government level, causes Intersectoral imbalances and territorial fragmentation where certain departments are doing better than others and certain local municipalities are far more advanced than others within the same region-in this case Western Cape province.

5.2 LEGISLATIVE REFORMS

Success in mainstreaming climate Change adaptation at the local level will be best guaranteed by a change in the current institutional systems and structures which are legally borne by the Municipal Systems and Structures Acts. These two pieces of legislation together with the MFMA when well streamlined hold the key to success for

² UIA,2002. Institutional fragmentation. <http://encyclopedia.uia.org/en/problem/133687> as accessed on the 9-12-2017

South Africa's mainstreaming effort. A review of Chapters 5, sub sections 23-37 dealing with Integrated Development Planning and Chapter 6 on performance Management in the Municipal Systems Act as well as chapter 4 and 5 of the Municipal Structures Act dealing with Internal Structures and Functionaries, should be undertaken as a matter of urgency in order for both pieces of legislation to explicitly provide for climate Change mainstreaming into Municipal systems and structures. Chapter 5 of the Systems Act should provide for the mandatory mainstreaming of Climate change into IDPs particularly sub-section 26. Checks and balances will need to be put in place to compel both politicians and Municipal staff to act on mainstreaming, so explicit mention of Climate Change in Chapter 6 of the systems Act needs to be done. As a cross cutting function, climate change needs to be built into performance management systems for all municipality officials and this can more effectively be done through provisions by law for the mainstreaming of Climate Change into IDPs at the objectives level and which can then cascade into SDBIPs. Meanwhile Chapter 4 of the structures Act needs to explicitly mention and include climate Change to the functions of Executive Committees, Mayors and the Municipal managers. In the same vein Chapter 5, should list Climate change as one of the main municipal functions in sub-sections 83 and 84, making sure that the climate Change mandate is clear across all types of municipalities and also ensuring that there is a clear delineation of functions and powers across all spheres of government in subsequent sub-sections. Lastly but not least, the climate Change function will need to be moved from the environmental management department of every Municipality to a more central and influential department such as the Municipal manager's office for better coordination and accountability. This move will give it the needed clout and help dispel the current misconception of climate Change as an environmental issue instead of a developmental and service delivery agenda item that it is.

5.3 TAILORED PERFORMANCE MANAGEMENT SYSTEMS

There is also need for more integration in the areas of institutional systems and structures coupled with performance management systems that foster learning and innovation. At present, there is a culture of Token Compliance where adaptation studies and strategies are drafted, in response to pressure from Provincial or National departments, at great cost but never followed up by adequate resource allocation, implementation plans and Monitoring and Evaluation systems. The lack of a National M&E system for adaptation against which Municipal action can be measured against has facilitated the current culture of tokenism and until a comprehensive monitoring system is put in place and fully mainstreamed into municipal officials' performance management systems it will be very difficult to ensure compliance and measure both progress and impacts. This M&E system should also be linked to the Auditor General's oversight role to ensure that clean audits also include compliance with set mainstreaming targets and climate action goals.

5.4 CAPACITY BUILDING

The lack of skilled manpower has been identified as a major cause of the lag in mainstreaming during the study however none of the municipalities under study have developed a clear human resource development plan aimed at addressing this institutional capacity short fall; neither have monetary resources been assigned, in any of the three IDPs during the current planning window, to address lack of skilled manpower. Resource constraints in term of fiscal budgets have been cited as the cause of the latter-that both National and Provincial governments do not provide adequate and sustained funding to warrant the establishment of new climate change positions or a full-fledged climate change unit in the case of the Swartland local Municipality. Locally financed Capacity building programmes are also non-existent despite the fact that the study shows a high level of expressed need, among municipal staff, of such training. According to Mojafi (2014), climate change adaptation encompasses building capacity by way of raising awareness, collection of climate

data, monitoring and research as well as skills development. Increased investment in Human resource development is therefore needed and funding should be made available through the equitable share system. It is essential therefore that municipalities develop an internal funding mechanism to address the challenge of lack of access to adequate financing for climate change interventions (Mojafi, 2014) or sort from alternative sources such as the various climate change funds set up under the UNFCCC finance framework. Each municipality should establish an interdepartmental climate change committee comprised of competent municipal staff, as a community of practice, whose sole responsibility is to serve as a climate change champion within each respective department and a liaison person for interdepartmental cooperation.

5.5 POLITICAL LEADERSHIP NEEDED

Internal resistance to institutional change has also been highlighted during the study as one of the main causes of the lag in climate change adaptation reforms. Change is often received with mixed feelings across all three municipalities as well as among both councillors and municipal officers as it often entails a change in the status quo. However, the study has also revealed high aptitude levels among senior management staff to manage change once it has been endorsed by their political superiors. So, ensuring that mainstreaming takes place will depend on political will and the ability to access additional funding – both of which are often show stoppers at the local government level, particularly in the current economic climate (Roberts, 2012). Since politics clearly plays a major role in any decision-making process within a municipality, securing the political buy-in and the involvement of politicians in both inspiring behavioural change and providing the needed oversight is essential in attaining both mainstreaming and subsequent climate action success. Both the Systems and Structures Acts should clearly endorse the role of councillors as climate change champions in their respective constituencies and ensure that the necessary checks and balances are put in place to ensure accountability. Going by the results from this study, senior management staff in the three municipalities are effective in managing

change however no change is effected unless endorsed by their political superiors-to the frustration of the street level Bureaucrats. Therefore, compelling the complete involvement of local politicians in climate change adaptation by law will essentially have a ripple effect on senior management staff since the achievement of the political mandate is done through municipal staff.

5.6 PARTICIPATORY DEMOCRACY

Furthermore, climate change needs to be made an electoral issue in South Africa in order to ensure political accountability. Since climate the majority of communities does not consider change a priority, local politicians do not feel compelled to act with urgency and this is where civil society organizations can play a critical role in raising awareness among communities. This lack of politicization of Climate Change at the community levels in South Africa has, to a considerable degree, perpetuated the absence of adaptation considerations from the IDP wish lists and subsequently prioritized deliverables. This has in turn prevented comprehensive local risk assessments from being conducted to allow for localised planning and contextual response strategies the IDPs. The current lack of a healthy appreciation of the dangers of climate change at the community levels and its prioritization in the IDP processes is therefore yet another missing link essential for successful adaptation mainstreaming at the local government level. The current system leaves climate change considerations at the discretion of elected local politicians and hence at the mercy of other “more” pressing socio-economic needs unless compelled otherwise by either provincial or national government. If South Africa is to attain its adaptation mainstreaming goals as envisioned in the current NCCRP and the draft NAS, it will require a meeting of top-down (government-initiated) and bottom-up (grassroots-initiated) endeavours. However, grassroots initiated interventions and overall community involvement will not be attainable unless they are able through established democratic institutional systems and structures to hold their elected representatives accountable. Climate change accountability will therefore have to be devolved to lower

structures such as sub-councils and ward committees where communities can hold both municipal officials and councillors to account for locally developed climate Action Plans.

Furthermore, while the participation of civil society organizations was outside the immediate scope of this study, the need for their involvement in the mainstreaming process soon became apparent and provision needs to be made, in the aforementioned pieces of legislation, for multi-stakeholder consultative platforms at the local level to mirror those at the national level such as the National climate change Committee (NCCC). Further studies will need to be made on the feasibility of making such structures statutory in some form so as to give a binding edge to decisions made in such platforms.

5.7 WEAK INTERGOVERNMENTAL COORDINATION

Intergovernmental coordination beyond the National Department of Environmental Affairs' the Local Government Climate Change Support Program (LGCCSP) is fragmented; there seems to be a lack of a clear devolution of the climate change function from DEA, through provincial structures to Local government entities and vice versa. The approach is still mainly top-down-there is a lack of sufficient funding and clarity on mandate of each respective tier of government, interventions from both national and provincial tiers are sporadic, unaligned and often project based providing little to no post implementation support hence stifling continuity and rendering them unsustainable. Furthermore, not all local government strategies are fully aligned to the NCCRP and NAS, firstly because the latter is still awaiting Cabinet approval and secondly because of resource constraints both fiscal and human capital. The lack of a national climate Act and the lack of relevant clauses in the Municipal systems and Structures Acts as well as the MFMA makes enforcement of the NCCRP's tenets of mainstreaming adaptation concerns into Municipal systems and hierarchy unattainable. Institutional Fragmentation and lack of coordination among the various

departments within each respective municipality remains a significant hurdle and a barrier to successfully integrated climate governance (Müller, 2008).

On the other hand, however, while there are concerns on the implementation model chosen for LGCCSP, it is a good start, a practical means by which to begin mainstreaming the process of adaptation planning in a municipal environment dominated by competing and often conflicting sectoral and political interests (Roberts, 2012). It should however be followed up by the establishment of a national task team or unit comprised of competent and permanently employed civil servants to oversee the long-term roll-out of capacity building interventions across all sub-national governments. The use of consultants will not yield the needed in-house capacity in the long term and will just perpetuate a culture of dependence of government departments on consultants.

Furthermore, as a matter of urgency the climate change function in the Department of Environmental Affairs will need to be moved into the Presidency particularly the planning commission to ensure integration of climate change concerns into national development planning. This is imperative for ease of coordination across all national sector departments and bearing in mind that all future National development planning will be done in the context of a global changing climate. In the same vein the Premier's office at the provincial level should house the climate change function-both the Premiers and the presidency should retain fiduciary responsibility and accountability to Parliament and provincial legislature. At the local levels, this function should reside in the Mayor's office particularly under the Municipal managers' leadership.

5.8 UNFUNDED MANDATE

Climate change remains an unfunded mandate in South Africa, as far as the national fiscus allocation policies of the National Treasury department are concerned. The Equitable share formula which is used by Treasury to allocation both Operational

(OPEX) and Capital (CAPEX) budgets do not factor in climate Change financing let alone environmental management financing. Consequently municipalities (both politicians and administrators) are neither sufficiently motivated nor compelled to allocate sufficient resources for climate change programmes and projects.

In cases where there are budget shortfalls, which is usually the case in most small and rural municipalities, climate change never receives any allocation because other socio-economic needs are prioritised. Consequently, such municipalities lack institutional capacity for climate change characterised by lack of specialised climate change units or departments such as is the case in Swartland municipality and poorly qualified staff performing a secondary function.

5.9 INSTITUTIONAL DECOUPLING

Recapping on Bromley and Powell's (2012), definition of decoupling as follows:

At the policy–practice level, decoupling occurs when rules are unimplemented or routinely violated. Decoupling also occurs in the relationship between means and ends, when policies are implemented but the link between formal policies and the intended outcome is opaque (Bromley & Powell (2012)).

It is prudent to note that in the case of the three municipalities under study, Policy-practice decoupling speaks true to what is occurring within these three institutions. What is observed in these three municipalities is a classic case of institutional policy-practice decoupling where national policy imperatives have been partially adopted in the form of drafted Adaptation strategies and Climate Change position papers but no implementation is taking place. The adopted policy objectives or intentions are not implemented at all or are routinely violated in the case of the City of Cape Town which has going a step further in the development of department CAPAs. According to Bromley and Powell (2012), it best to think of policy–practice decoupling as symbolic adoption; token compliance to national or provincial government's demands that is

meant to legitimize the institutions in question. These climate change documents are “a nice to have” which is not followed up with resource allocation, structural changes and the development of needs specific interventions in the form of programmes and projects.

In all fairness, the reasons behind institutional decoupling-the decision or omission not to mainstream climate change practice into IDPs as a national government directive and hence allocate resources and implement adaptation interventions is not steeped in malevolence it is however, a case of political expedience in the face of scarce resources. Resources are instead directed to service delivery issues that politician deem as more important than responding to climate.

5.10 RECOMMENDATIONS OF THE STUDY

The research deliberations yielded very interesting and often engaging conversations with Municipal staff who made pertinent recommendations reflecting their interests and aspirations as well as their commitment in achieving the tenets of the National Climate Change Policy. Also, immerging from numerous literature consulted during the study literature are some topical issues all pointing to the need for stronger institutions. Therefore identified below are a number of areas that need deliberate interventions in order to address the lag in Climate Change mainstreaming, namely building institutional capacity and staff retention, Interdepartmental and intergovernmental cooperation, behavioural change both internally and externally, reducing political interference and clarity on Municipal climate Vision, enhanced enforcement capacity of by-laws and policies, improved evidence based decision making in Municipalities and lastly learning and innovation as a means of ensuring institutional relevance and adaptability.

- By law the climate change function should be situated in the highest office in any Municipality which is essentially the Mayor’s office

- The general lack of capacity to manage climate change at municipalities is of utmost concern. Capacity building should be at the centre of every municipal support programme implemented by either other spheres of government or donor agencies.
- Closely tied to the issue of lack of capacity is the problem of high staff turnovers across the board and particularly in the climate space. Efforts should be made to not only source but retain technically qualified staff through staff retention incentives; Staff rotations and preparation of special contracts for skilled Staff.
- Climate change cannot continue being an unfunded mandate in South Africa and National Treasury should develop a funding mechanism through the equitable share formula to finance climate change through the national fiscus.
- There are low levels of public awareness on Climate Change; the national and local regulations and related technical standards which address climate change. Incorrect messaging and passing of wrong information packages on climate change is also another challenge. In response, the use of traditional forms of media such as Television and local radio stations as well as social media platforms need to be stepped up. Deliberate and well-designed awareness programmes to educate the public on Climate Change need to be implemented. By so doing people can begin to raise climate Change as a service delivery issue during the IDP's public participation processes.
- Considering that most municipal functions are concurrent and the mandate is shared with other spheres of government, healthy Inter-governmental Relations (IGR) are important in avoiding conflict of interests, ensuring the pooling and optimal allocation and use of limited resources as well as alignment of policy and strategic imperatives. There is a need therefore for the creation and sustenance of healthy Intergovernmental relations- integrated planning and cooperation.
- The institutional management terrain is still characterized by Silos, an inflexible hierarchical system whose proximity to political influence serves as a hindrance to

swift decision making and action. There is also a mandate “scope creep” a clear lack of understanding of the delineation of roles and responsibilities leading to duplication and breach of other departments’ mandate. There is evidence of this contravention of mandate among departments leading to incidences of conflicts. In response, interdepartmental cooperation should be encouraged by both policy and bye-laws to ensure compliance.

- Political interference in the day to day running of a municipality is endemic in South Africa and hence not unique to the cities under study: There is therefore need for training of politicians on Climate Change, Climate change budgeting and reporting process as well as the need for restraint and adherence to systems and procedures in the allocation of resources and the everyday running of the city. There is need to put in safeguards that ensure that Climate Change programmes are not affected by political change.
- As part of a broader Monitoring and Evaluation system, it should be mandatory for climate change to be included as a Key Performance Area (KPA) in all performance management contracts of senior municipal staff including those of the Mayors.
- In the spirit of promoting participatory democracy; there is a need for strengthening, by way of legislative proviso, of existing stakeholder management platforms particularly those tailored to foster cooperation with both civil society and private sector players.
- As part of the broader institutional transformation agenda, urgent legislative reforms are needed. The Municipal finance management Act, the Municipal Systems Act and Municipal Structures Act need to be amended as prescribed in the preceding chapters.
- The capturing and good communication of programme/project failures and successes, best practice and centres of excellence is key to learning and innovation and in turn the success of prioritized climate actions. Municipalities need

to invest more in learning i.e. Knowledge management and innovation (both in terms of best practice as well as technological innovation).

- Data management and evidence based decision making: As the saying goes: "*you can't regulate what you can't measure*"; the capturing and synthesis of Climate Change data in general and climate change indicators, in particular, is poor in the Municipalities. There is therefore need, as a matter of policy, for a data management system to be put in place that produces reliable metrics informing policy and decision making at the highest levels as well as at the operational levels in municipalities.
- Municipalities are generally not strong at enforcing by-laws and regulations across the board and particularly those that foster a transition to a low carbon resilient future, thus there are low levels of compliance. There is therefore an urgent need to improve capacity to prosecute/enforce bylaws and regulations as well as provide broader support and enticements which include incentives in the various sectors.
- The current Draft Climate Change Bill, should recognise and place municipalities at the centre of the climate Change agenda by clearly legislating the role of mayors as climate Change Champions and providing for the devolution of climate change functions from the National Minister of Environmental Affairs to the Municipal Mayors.

5.11 CONCLUSION

South Africa is on the right track in as far as a conducive policy environment for mainstreaming is concerned, there is just urgent need to fast track institutional reforms and getting the question of the political will right.

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7. APPENDICES

7.1 ETHICAL CLEARANCE LETTER



12 December 2014

Mr Samuel Ndumba Chademana 204516082
School of Management, IT & Governance
Westville Campus

Dear Mr Chademana

Protocol reference number: HSS/1462/014M

Project title: Mainstreaming Climate Change adaptation into integrated development plans: From rhetoric to action

Full Approval – Expedited Application

In response to your application received on 31 October 2014, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

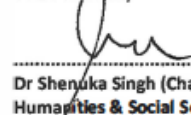
Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully


.....
Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

Cc Supervisor: Professor B Mubangizi
Cc Academic Leader Research: Professor B McArthur
Cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000

7.2 QUESTIONNAIRE

STUDY QUESTIONNAIRE

A. PURPOSE OF THE SURVEY

- To describe and assess the level of progress in Mainstreaming Climate Change Adaptation considerations into your municipality's IDP and departmental plan.
- To assess the organizational culture of your municipality within which developmental interventions are carried out.

B. CONFIDENTIALITY OF RESPONSES

Do bear in mind that:

- THE PROCESS IS CONFIDENTIAL (i.e. NO INDIVIDUAL POINTS OF VIEW WILL BE REVEALED).
- All responses will be sent directly to a survey processor where it will be pooled to form part of a database for statistical analysis.
- We truly value your participation & help; Thank you!

C. TERMS AND DEFINITIONS

- **“Communication Channels”** = newsletters, intranet, staff sessions, etc.
- **“Clients”** = the clients you serve, whether they are internal clients or external clients.
- **“Leaders”** = employees in supervisory, middle and senior management positions.
- **“Processes and Systems”** = manual and/or automated business systems and procedures that you use to do your work.
- **“Team member”** = colleagues in your immediate unit or Department.
- **“We”** = your unit/department.
- **Climate variability**= refers to the way climate variables, such as temperature and rainfall, depart from the average state, either above or below average, in an area without changing the long-term average, e.g. a certain area might have an average summer temperature of 21°C, but daily temperatures could range from, say, 15-30°C.
- **Climate change adaptation**= Adaptation means anticipating the adverse effects of climate change and taking appropriate action to prevent or minimize

the damage they can cause, or taking advantage of opportunities that may arise. It has been shown that well planned, early adaptation action saves money and lives later

•Climate change adaptation Mainstreaming= means integrating climate concerns and adaptation responses into relevant policies, plans, programs, and projects at the national, sub-national, and local scales.”

D: SURVEY INSTRUCTIONS: Please take note of the following instructions: • The survey consists of four sections, each with a number of statements that relate to the way things get done in Your Respective Municipality and its departments. • Kindly respond to every statement listed below by clicking on the relevant option in the space provided. • Select the statement that you think best describes your experience within your own workgroup or team. • Indicate how strongly you “agree” or “disagree” with each of the following statements. • If you neither “strongly agree” nor “strongly disagree”, select the “unsure” option in the middle. • There are no incorrect answers (i.e. no “right” or “wrong” responses). • Please be as honest as possible and ensure that you answer the entire questionnaire. Please start with the survey now by clicking on the I agree button and then the Continue button below.

BIOGRAPHICAL INFORMATION-The biographical information below will only be used to identify trends within the Municipalities. -Information provided in this section will be treated with the utmost confidentiality.

Department

1. Water and Sanitation
2. Environmental Resource management
3. Electricity
4. Waste Management
5. Roads & Storm water
6. Transport
7. Urban and Regional Planning
8. Human settlements
9. Economic Development
10. Environmental Health and safety
11. Fire & Disaster management
12. Procurement
13. IDP
14. Other

Your management level?

1. Senior
2. Middle
3. Lower

Highest academic qualification?

1. Matric
2. Diploma
3. Degree
4. Honours
5. Masters
6. PhD

Years of service in public service?

1. 1-2yrs
2. 2-4yrs
3. 4-6yrs
4. 6-8yrs
5. 8-10yrs
6. 10-12yrs
7. >12yrs

Gender

1. Male
2. Female

Age

1. Below 20yrs
2. 20-29yrs
3. 30-39yrs
4. 40-49yrs
5. Above 50

Race

1. African
2. Coloured
3. Caucasian
4. Indian

Municipality

1. City of Cape Town
2. West Coast District
3. Swartland
4. Saldanah

SECTION 1: YOUR KNOWLEDGE OF CLIMATE CHANGE ADAPTATION MAINSTREAMING

I have adequate knowledge of what climate change adaptation is

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

I have sufficient understanding of what climate change adaptation mainstreaming is

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

I'm aware of the policy and legislative framework on climate change adaptation in South Africa

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

I'm aware of the importance of mainstreaming climate change adaptation into my department plans

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

I have adequate skills on how to mainstream climate change adaptation concerns into my department plans

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

I have the necessary experience in mainstreaming climate change adaptation into my department plans

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

1) I feel overwhelmed and out of my depth when it comes to mainstreaming of climate change into my department plans

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

My lack of knowledge on climate change mainstreaming has a negative impact on my contribution to mainstreaming processes in my department

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

I feel I need more training on the topic

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

SECTION 2: DEPARTMENT SYSTEMS AND STRUCTURES

Our municipal IDP has clearly mainstreamed climate change adaptation deliverables (goals and objectives)

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department strategic/business plan is aligned with the IDP of our municipality

1. Strongly Disagree
2. Disagree
3. Undecided

4. Agree
5. Strongly Agree

Our department has clearly mainstreamed climate change adaptation deliverables into our department strategic/business plan.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

We are all aware and conversant with the objectives of the climate change adaptation deliverables in our department plan

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

We used the “Lets Respond” guide and toolkit developed by National department of environmental affairs to mainstream climate change adaptation considerations into our department plans

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

As a department, we have conducted a climate change impact assessment of our sector and identified current and likely impacts of climate change

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

In our department climate change adaptation deliverables, have been translated into climate response projects in our SDBIPS and budget allocations with clear targets and milestones

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree

5. Strongly Agree

As a department, we have already started noticing and recording positive outcomes from our climate change adaptation response projects

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

There is a climate change champion (focal person) in our department

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

There is adequate collaboration with other departments in achieving the climate change response targets and milestones

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department is part of an inter-departmental committee overseeing the climate change activities across the municipality

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our climate change related activities are adequately funded by our department budget

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our climate change related activities are adequately resourced in terms of manpower

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department has been successful in the implementation of climate change adaptation projects

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

SECTION 3: ORGANIZATIONAL CULTURE

Within our department everyone is involved in open and robust discussion regarding key strategic issues.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department has leaders who are passionate and positive in the way in which they manage and communicate strategy.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Employees' performance goals are aligned with that of the department.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Within our department senior managers sponsor and drive change.

1. Strongly Disagree
2. Disagree
3. Undecided

4. Agree
5. Strongly Agree

Within our department the reasons for change are communicated clearly and understood by all

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Within our department plans are developed to manage change.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Within our department employees are prepared to deal with and manage change.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Within our department successful change is celebrated.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department constantly provides its employees with opportunities to learn new knowledge and skills

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department creates opportunities to share knowledge, information and experience.

1. Strongly Disagree
2. Disagree

3. Undecided
4. Agree
5. Strongly Agree

In our department, we are encouraged to create opportunities to work in partnership with other units and departments

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department allows employees to make mistakes and learn from it

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department rewards creativity and innovation (we value and celebrate it).

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our organizational structure promotes speed of decision-making

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department uses its performance management system to stimulate employee to deliver on set targets and milestones.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our department rewards the performance of its employees appropriately

1. Strongly Disagree

2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our leaders encourage feedback from lower levels (upward communication).

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Our leaders make time to communicate and connect.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

SECTION 4: INTERGOVERNMENTAL RELATIONS

There is sufficient clarity on the mandate of Municipalities concerning Climate Change mainstreaming from National Department of Corporative Governance

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

There is clear communication on Climate Change mainstreaming objectives and processes from provincial and national governments

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

There is adequate fiscal support from National Treasury for climate change projects

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

There is adequate technical support from Provincial Government in terms of response strategies for Climate Change adaptation

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

There is adequate intergovernmental coordination support from SALGA on Climate Change Adaptation interventions

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

7.3 TURNITIN REPORT

12/18/2018 Turnitin

Turnitin Originality Report		
Processed on: 18Dec2018 10:02 PM CAT ID: 1042055475 Word Count: 43129 Submitted: 3	Similarity Index	9% Similarity by Source Internet Sources: 8 Publications: 5 Student Papers: 3
Mainstreaming climate change adaptation practice into Integrated development Plans in South Africa By Samuel Chademana		

< 1% match (Internet from 14Apr2018) http://researchspace.ukzn.ac.za/bitstream/handle/10413/12956/Malima_Sussan_2014.pdf?seq=
< 1% match (Internet from 16Mar2014) http://cps.org.za/cps%20pdf/RR113.pdf
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< 1% match (Internet from 08Mar2012) http://www.c17.org.za/LiteratureRetrieve.aspx?ID=98799
< 1% match (Internet from 14Nov2014) http://www.sarua.org/files/SARUA%20Climate%20Change%20Vol1No1%20KCPF.pdf
< 1% match (Internet from 24Mar2016) http://www.afd.fr/jahia/webdav/site/afd/shared/PUBLICATIONS/RECHERCHE/Scientifiques/Focales/18VAFocales.pdf

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7.4 FOCUS GROUP SCHEDULE

FOCUS GROUP DISCUSSIONS PROCESS

Mainstreaming Climate Change Adaptation into Integrated Development Plans

1. introductions
 - Who I am and what I'm trying to do
 - What will be done with this information
 - Why we asked you to participate
 - If you are in top management, we would like to excuse you at this time

2. Ground Rules
 - We in a safe environment
 - Everyone's input is equally Valued
 - Respect each speaker; Listen and Ask Clarifying questions
 - Keep Jargon to a minimum
 - Cut to the chase
 - Signal when we are going off track
 - Discussion will focus on interests; not people/organizations or criticisms
 - No idea is bad
 - Phone silent
 - Organizational affiliations are left at the door
 - Let's Have Fun

3. Situational Analysis/Assessment
 - Climate change factored in your department Planning
 - Climate change Vulnerability and risk assessments been conducted
 - In your opinion is Climate Change adaptation and mainstreaming well understood among Councilors
 - Are councilors in general supportive of your Climate Change Adaptation efforts

4. Adaptation Portfolio
 - Any projects underway including those not captured in the CAPAs or SDBIPS that involve addressing climate change impacts or risks
 - Project resources to implement above: cost of intervention & HR resources
 - Number of staff assigned to adaptation projects and their respective skill levels vis-à-vis CCA
 - Do you think officials in the department have a good understanding of Climate change and how to integrate it into their work?
 - Total budgetary/cost allocation for current year and previous four years
5. Integration
 - Integration/alignment of adaptation projects (CAPA and beyond) with the IDP Strategic Focus Areas (SFA)
 - How much cross-sectoral work do you do around climate change
 - Do the current SFAs facilitate or rather compel you to plan for adaptation
 - By what mandate do you implement adaptation projects
 - If you are planning for adaption does this compulsion come from actual on-the-ground climate events
6. Organizational Culture
 - Who makes decisions for change in your department
 - Are there change related decisions that top management can make without the consent of Councilors? How much leverage do they have
 - Is climate Change mainstreaming one of those decisions that can be made without the consent of Councilors?
 - Do all budget allocations and staff deployment decisions made with the consent of Councilors?
7. Research and Partnerships
 - Linkages with academic and civil society institutions
 - MOUs or any other formal partnership arrangements
 - Any informal and ad hoc collaboration
 - Any research projects underway at the moment
8. SDBIP/CAPA Talking Points
 - Focal Person or Champion for climate change adaptation in your department?
 - Linkages between SDBIP/Climate Change adaptation intervention?
 - Challenges in Implementing adaptation intervention or mainstreaming if any?