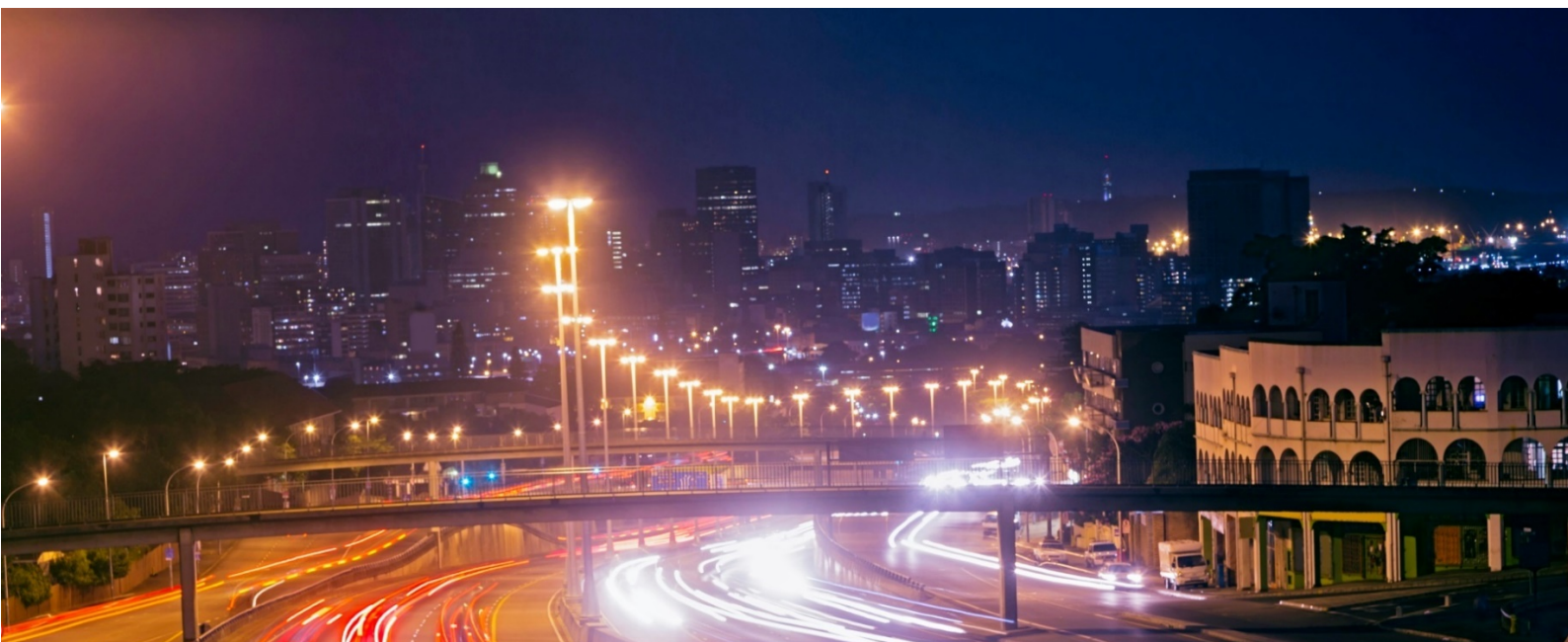


MAINSTREAMING CLIMATE RESPONSIVENESS INTO CITY PLANS, BUDGETS AND GRANT CONDITIONS

Report 3a – Phase 3



Climate Mainstreaming in South African Cities

A Review of Infrastructure Grant Conditions, Outputs and Outcomes

31 October 2018

EXECUTIVE SUMMARY

Background

The change in the global mean temperature has led to increased instances of extreme weather events and climate change. These instances present a risk to urban infrastructure assets. As such, cities need to maintain or adapt existing infrastructure, as well as build new infrastructure that is resilient to climate change uncertainties. The estimated funding required by South African cities to respond to these climate impacts far exceeds what is currently available in the public grants system (or cities' own revenues and reserves), indicating a clear need to access alternative climate financing options. In addition to this concern with the resilience of urban infrastructure, cities are notoriously heavy contributors to greenhouse gas emissions. Improving the efficiency of urban growth through more integrated and compact development is thus a key contributor to mitigating climate change impacts.

Key to unlocking this climate finance is the ability to demonstrate that a degree of climate resilience and responsiveness already exists within an institution's capacity, planning and policies. It is therefore critical to ensure that grant financing mechanisms and built environment planning processes are designed to encourage investments that are informed by, and respond to, current and anticipated climate change impacts.

Mainstreaming Climate Responsiveness into City Plans, Budgets and Grant Conditions is therefore a timely and strategic project that seeks to develop practical tools and guidance to support the integration of climate resilience into municipal infrastructure planning and budgeting instruments.

Objective of the Study

Aligned with National Treasury's on-going grant reform initiative, this report focusses on opportunities in the conditional built environment infrastructure grants available to metropolitan municipalities to support climate responsive infrastructure development. The report draws on international best practice, interrogates existing challenges in the public grants system, and identifies opportunities to effectively mainstream climate considerations into three specific grant frameworks. These grants represent a cross-section of the types of grants currently in the system - with the Urban Settlements Development Grant (USDG) being a large discretionary grant, the Integrated City Development Grant (ICDG) being a small incentive-based grant, and the Public Transport Network Grant (PTNG) a combination of the two. Thus, while the recommendations in this report are largely specific to these individual grants, the principles and proposed framework for amending and updating grant conditions are applicable and relevant to others.

Key Findings

Based on a series of interviews with National and City officials, custodians and managers of the USDG, ICDG and PTNG, the following key themes were identified:

- There is a need to be circumspect in introducing new conditions, to ensure they are contained, targeted and integrated into existing systems and frameworks.
- Amending grant conditions must go hand-in-hand with both the relevant line department's policy changes, and the provision of sufficient time, resources and capacity building support to allow cities to respond to the changes.

- Significant improvements in climate responsiveness can be achieved by ‘getting the basics right’ (i.e. inherent resilience). For example, where cities follow current policy prescripts to ensure more efficient and denser urban development this automatically reduces green house gas emissions and thus mitigates the urban contribution to climate change. Nevertheless, planners should also seek to identify opportunities for *additional* climate responsiveness to be integrated, as a preferred design option is developed for individual investment projects and programmes.
- Integrating climate responsiveness into urban development requires multisectoral and multidimensional responses and demands significant transversal collaboration amongst a range of stakeholders both within and between spheres of government.
- Additional mechanisms to incentivise change should also be explored – such as the Budget Facility for Infrastructure (BFI) and City Infrastructure Delivery and Management System (CIDMS).

The above analysis informed an in-depth review of the three grant frameworks, resulting in a series of indicative changes (including both new and amended conditions¹) with approximate time and resource implications. The proposed changes centre around four key definitional and operational (planning, reporting and monitoring) areas:

1. Introduction of explicit climate resilient and responsive **research, analysis, reporting and monitoring processes** (including standardised risk and vulnerability assessment processes and protocols, as agreed upon, and under the guidance of, the Department of Environmental Affairs and the National Disaster Management Centre).
2. **Promotion of densification** as well as investment in the preservation and expansion of urban blue and green spaces.
3. Ring-fencing a portion of the percentage of funds already allocated to capacity building within each grant to **procure capacity for the identification and development of credible, feasible climate resilient projects**.
4. Identification of city-specific ‘**climate risk zones**’² as priority areas of intervention. The aim of these zones is to highlight and prioritise areas at highest risk from climate change impacts, and to inform the required investment to respond to these risks. The intention of this adaptation-focussed approach is to ensure (and improve) the durability, sustainability and resilience of grant-funded infrastructure.

Recommendations and Next Steps

Amending grant frameworks to reflect climate resilient considerations is not a standalone or short-term intervention; rather, it is a key component of a wider effort by National Treasury to mainstream climate resilience and responsiveness into a suite of city budgetary and planning instruments. Therefore, mainstreaming efforts must be complementary to one another, tempered to the current capacity of cities, and aligned to appropriate new/revised sectoral policies.

In addition, many of the proposed changes across the three grants relate to/rely on the need for i) datasets and standardised climate vulnerability, risk and low carbon monitoring tools to guide grant investments; and ii) the development of climate resilient project pipelines. This reinforces the needs for improved co-ordination

¹ Where the term ‘conditions’ refers to a grant’s *outcomes, outputs and conditions*.

² Aligned to both the Disaster Management Act (2002) and recently gazetted Climate Change Bill (2018)

between sectors to effectively and efficiently ensure prioritised functional areas of investment are targeted, and tackle cities' resilience issues holistically.

Given the immediate opportunity presented through the on-going reform process, the report concludes with a series of recommendations, drawing on the support, input and involvement of relevant sector departments and the cities themselves – summarised as follows:

- Convene a series of meetings to further interrogate the practicalities (time frames, resource requirements, alignment with wider processes and budgeting cycles, shifts in roles and responsibilities of receiving and transfer officers, etc.) to take further the possible changes per grant.
- Explore modalities for supporting/strengthening the development of climate responsive project pipelines for cities to ensure they are equipped with a repository of investment priorities that speak to the requirements of the updated grant frameworks (prior to introducing hard conditions).
- At the city level, consolidate and communicate national government's existing climate-related efforts³, their links to sectoral planning, reporting and monitoring processes, and the expected roles that other sectors are required to play in terms of inputting/operationalising these (e.g. information on sector specific policies/plans with adaptation or mitigation elements, availability of baseline data, existing on climate-related localised/municipal studies).

Whilst not directly linked to the grant reform process, there are opportunities to influence both the BFI and CIDMS selection criteria and assessment processes – ensuring alignment both with the proposed grant condition changes and the recommendations detailed in the Built Environment Performance Plan (BEPP) Guidance Note.

³ Including DEA's Local Government Climate Change Support Programme, Cities Resilience Programme, draft MSDF's Minimum Standards on Spatial Targeting, draft Climate Change Bill, and Environmental Impact Assessments

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GLOSSARY

| | |
|-----------------|--|
| ADB | African Development Bank |
| BEPP | Built Environment Performance Plan |
| BFI | Budget Facility for Infrastructure |
| CIDMS | City Infrastructure Delivery and Management System |
| CR&R | Climate responsiveness and Resilience |
| CSP | Cities Support Programme |
| DCoG | Department of Cooperative Governance |
| DEA | Department of Environmental Affairs |
| DPME | Department of Planning, Monitoring and Evaluation |
| DRDLR | Department of Rural Development and Land Reform |
| FFC | Financial and Fiscal Commission |
| HSDG | Human Settlements Development Grant |
| ICDG | Integrated City Development Grant |
| IDP | Integrated Development Plan |
| LCCAP | Local Climate Change Action Plan |
| LGCCSP | Local Government Climate Change Support Program |
| LGU | Local Government Unit |
| M&E | Monitoring and Evaluation |
| MSDF | Municipal Spatial Development Framework |
| NDMC | National Disaster Management Centre |
| NRW | Non-Revenue Water |
| O&M | Operation and Maintenance |
| OECD | Organisation for Economic Co-operation and Development |
| PTNG | Public Transport Network Grant |
| PTS | Public Transport Strategy |
| SALGA | South African Local Government Association |
| SANBI | South African National Biodiversity Institute |
| USDG | Urban Settlements Development Grant |
| V-LED | Vertical Integration and Learning for Low Emission Development |

1 INTRODUCTION

1.1 SETTING THE CONTEXT

Rapid population growth, urbanisation and the increasingly prevalent impacts of climate change are placing increased pressure on South Africa's already stretched natural resources, infrastructure and related service delivery levels. It is imperative that cities proactively respond to this nexus of development challenges to ensure urban areas are habitable for growing populations, whilst continuing to drive national economic growth.

In response to these challenges, the Cities Support Programme's (CSP's) project, the *Mainstreaming Climate Responsiveness into City Plans, Budgets and Grant Conditions*, seeks to develop practical tools and guidance to enable the integration of climate responsiveness and resilience (CR&R) into municipal infrastructure planning and budgeting processes, with a view to fostering economically, socially, and environmentally viable approaches to achieving inclusive, sustainable growth in cities.

The first phase of the project produced two reports: i) a high-level analysis of how climate responsiveness is currently mainstreamed or reflected in city policies and plans, and ii) an estimation of the cost of climate responsiveness, and an analysis of actual total city expenditure for all eight metropolitan municipalities as the basis for the development of a framework of analysis.

The second and third phases were concurrent. The second phase developed practical guidance and tools to support cities in mainstreaming climate responsiveness into their plans, based on in-depth interviews with city officials and case study analyses targeting the Built Environment Performance Plans (BEPPs).

The third phase has two components: firstly, recommendations for reforms to national grant conditions⁴ and the associated programmes of support to cities and, secondly, a recommendations to enhance cities' access to climate finance to support the implementation of climate responsive interventions.

This Phase 3 report focuses on the former component; it presents an overview of relevant international experiences and lessons learned and draws together key findings and emerging themes from interviews with key national and city officials, custodians, and managers of the Urban Settlements Development Grant (USDG), Integrated City Development Grant (ICDG) and Public Transport Network Grant (PTNG). The study presents a framework and series of recommendations for amending/redesigning grant conditions and related planning processes to address climate responsiveness and resilience (CR&R), to be used as a basis on which to engage with cities and other key stakeholders towards operationalising these changes.

⁴ Where the term 'conditions' refers to a grant's *outcomes, outputs and conditions*.

1.2 GRANT FRAMEWORKS: SCOPE FOR CHANGE

The National Treasury manages a system of capital grants to city governments, worth in excess of R15 billion/annum. International experience shows that the way in which capital grants are spent has a direct impact on the resilience of a city – either strengthening or weakening its capacity to respond to climate risks and vulnerability. This is particularly pertinent within the context of developing countries, where tackling poverty and improving the adaptive capacity of a population cannot be achieved in isolation of one another, as emphasised in a paper on Poverty and Climate Change (collectively prepared by ten donor and public sector entities) that stated ‘*mainstreaming climate issues into national development policies ensures consistency between the needs of adaptation and poverty eradication*’⁵.

It is therefore critical to change the way in which cities plan and prioritise investments within short, medium, and longer-term planning horizons to ensure urban communities are better prepared to respond to the impacts of climate change, and urban economic activities can be sustained in the face of such changes. Given the differing nature and scale of these current and anticipated climate change impacts on cities throughout South Africa⁶, it is also important to ultimately reduce cities’ dependence on the national fiscus, giving them the autonomy to make informed choices and deploy resources at their discretion to address specific prioritised areas of investment.

An expenditure review of South Africa’s eight cities indicated that considerable funding and financing is required to address adaptation, mitigation and disaster risk management responses – noting that the immediate focus of expenditure will inevitably be on adaptation rather than mitigation efforts, given the existing threat of climate change impacts on municipal financial sustainability. These funding requirements exceed those currently available through the public grants system, indicating a clear need to access alternative climate financing options. To achieve this, there is a need to demonstrate that grant financing mechanisms and built environment planning processes are being used to encourage climate resilient investment at a city level, and that the capacity exists at a city-level to spend effectively on climate resilient infrastructure. This interim scaling up of expenditure requires cities to use their current capital grants more efficiently, which will require changes to the relevant grant frameworks.

Experience with urban capital grants has shown that there is capacity to tailor grant frameworks to achieve targeted outcomes, with a view to encouraging an emergence of investment at city level around prioritised areas of expenditure that respond to localised climate risks and impacts⁷. This report therefore endeavours to explore opportunities to introduce conditions and similar incentive-based changes into large, discretionary grants such as the Urban Settlements Development Grant (USDG) and the Public Transport Network Grant (PTNG) to drive climate responsive changes in investment patterns. The report also considers the potential to further enhance the incentive component of the

⁵ *Poverty and Climate Change: Part 2 - Adaptation Lessons from Past Experience*, prepared by: African Development Bank; Asian Development Bank; Department for International Development, United Kingdom; Directorate-General for Development, European Commission; Federal Ministry for Economic Cooperation and Development, Germany; Ministry of Foreign Affairs - Development Cooperation, The Netherlands; Organization for Economic Cooperation and Development; United Nations Development Programme; United Nations Environment Programme; The World Bank, 2003.

⁶ see Annex A

⁷ *The Role of Government in Making Infrastructure Investment Climate Resilient*, OECD, 2016

Integrated City Development Grant (ICDG) to explicitly promote CR&R. The policy signals that underpin these grants make them appropriate cases for this study, given that:

- i. The USDG is primarily about implementing infrastructure at a substantial scale in marginalised areas of a city, where the adaptive capacity of local populations and the resilience of the services and infrastructure they rely on is low;
- ii. The PTNG is similar to the USDG in that it promotes investment in large infrastructure to influence spatial patterns – fostering emission reductions through densification and improved efficiency of public transport systems; and
- iii. The ICDG uses grant money as an incentive to influence behavioural changes.

These three grants therefore represent a cross-section of the types of grants currently in the system – with the USDG being a large discretionary grant, the ICDG a small incentive-based grant, and the PTNG a combination of the two (with a discrete incentives component currently in development). Thus, while the recommendations in this report are largely specific to these individual grants, the principles and proposed framework for amending and updating grant conditions are applicable and relevant to other grants.

This scope, however, has to be tempered within the context of what each grant is trying to accomplish (Table 1), and with the reality that the overall quantum of grants to cities is declining, not increasing, and the policy intention is that this trend should continue. There is thus an inherent limitation in using grant conditions as the mechanism to incentivise climate-based changes in cities' planning, budgeting and project implementation.

Table 1: USDG, PTNG & ICDG Strategic Objectives

| Grant | Strategic Goal | Primary Purpose |
|-------|---|---|
| USDG | To assist metropolitan municipalities to improve household access to basic services through the provision of bulk, link and internal reticulation infrastructure, with a focus on the poor; and urban land production to support broader urban development, spatial integration and inclusion by supplementing the capital budgets of metropolitan municipalities | Supplements the capital revenues of metropolitan municipalities in order to support the national human settlements development programme, focusing on poor households. |
| PTNG | To support the National Land Transport Act (Act No. 5 of 2009) and Public Transport Strategy (PTS) and Action Plan in promoting the provision of accessible, reliable and affordable integrated municipal public transport network services | To provide funding for accelerated construction and improvement of public and non-motorised transport infrastructure that form part of a municipal integrated public transport network and to support the planning, |

| Grant | Strategic Goal | Primary Purpose |
|-------|---|--|
| | | regulation, control, management and operations of fiscally and financially sustainable municipal public transport network services |
| ICDG | The development of more inclusive, liveable, productive and sustainable urban built environments in metropolitan municipalities | To provide a financial incentive for metropolitan municipalities to integrate and focus their use of available infrastructure investment and regulatory instruments to achieve a more compact urban spatial form |

1.3 INFLUENCING INFRASTRUCTURE DEVELOPMENT AND PLANNING: INTERNATIONAL EXPERIENCE

The scope, potential modalities and barriers to incentivise planning and spending behaviours are largely influenced by a country's enabling environment – including its socio-political landscape, economic context and stage of development. However, drawing on case studies and mechanisms to incentivise change that have been adopted elsewhere is valuable and informative as South Africa tailors similar approaches to fit its context. This chapter provides an overview of where public and private sector stakeholders have influenced/incentivised climate mainstreaming (or climate responsiveness) at a national and/or city level.

An OECD study on *The Role of Government in Making Infrastructure Investment Climate Resilient* (2016) stated that '*there are several points of entry that governments can use to ensure that such infrastructure accounts for climate change, [one being]: Eligibility criteria to access infrastructure grants, when that third party is a local government bidding for funding.*'⁸

However, the report went on to identify that '*countries are increasingly referring to the need for climate resilience in their national infrastructure planning documents. However, there is currently little evidence that climate risks are being explicitly considered in infrastructure projects financed or commissioned by governments or infrastructure banks.*'

The table below summarises several examples where public sector and international development agencies have amended and operationalised policies and grant conditions to reflect CR&R considerations in planning and budgetary decisions – which could be adapted to the South African context.

⁸ Whilst this 'bidding' process is not wholly applicable to the South African grant system, the concept of 'eligibility criteria' aligns with the 'gate' conditions applied to many South African grant frameworks.

Table 2: Mainstreaming Climate Considerations into Planning and Budgetary Processes

| Mechanism | Example |
|---------------------------------------|---|
| Tools and Assessments | Technical and economic regulations/frameworks/tools (such as Strategic Environmental Assessments or Environmental Management Frameworks, Risk Assessments, Infrastructure Management Systems etc.) that are linked to grant conditions can be avenues for influence – provided they are designed to include explicit climate adaptation, mitigation or resilience components. |
| Resource Allocation Conditions | Many of ADB and KfW's loan and grant conditions have been amended to stipulate that the resources allocated to the project's risk assessment and resilience solutions must be proportionate to the potential damages incurred from extreme climate-related events. |
| Strategic Plans and Policy Statements | <p>The UK Government established a National Planning Policy Framework in 2012⁹, as part of its reforms to make the planning system less complex and more accessible. It describes what sustainable development in England means in practice for the planning system, as it is targeted at local authorities and decision makers. The Framework is underpinned by sector-specific National Policy Statements that stipulate how mitigation and adaptation should be accounted for in major infrastructure projects, specifically by demonstrating:</p> <ul style="list-style-type: none"> • how the latest climate projections have been applied, with the applicant being required to apply the high emissions scenario where the infrastructure has critical safety elements; • how actual and projected capacity and demand have been considered; and • whether the proposal may be seriously affected by more radical changes to climate beyond that projected in the latest climate projections, considering the latest credible scientific evidence. |
| | <p>The Queensland Climate Ready Infrastructure initiative requires local governments to consider climate change adaptation when applying for Queensland Government grants for infrastructure¹⁰. Specifically, grant applicants are required to demonstrate how the proposed project factors in:</p> <ul style="list-style-type: none"> • measures to minimise/reduce greenhouse gas emissions; and • potential impacts of climate change, such as adaptation strategies for extreme weather, natural disaster mitigation and/or engineering specifications. <p>The Initiative provides robust guidelines on what is expected in terms of qualitative and quantitative analyses, and recommended tools and resources – making the process as streamlined and structured as possible.</p> |

⁹ United Kingdom National Planning Policy Framework, Ministry of Housing, Communities & Local Government, 27 March 2012

¹⁰ Climate Ready Infrastructure Initiative: A guide for considering climate change in Local Government Grants and Subsidies Program (LGGSP) project proposals, Queensland Department of Local Planning and Government, August 2011

| Mechanism | Example |
|-----------|---|
| | <p>The UNHABITAT-implemented V-LED¹¹ Project piloted a process for integrating climate change adaptation and mitigation into local government unit (LGU) plans in the Philippines. A Local Climate Change Action Plan (LCCAP) guidebook was developed to define key climate terminology and provide guidance on operationalising climate responses at a local government level, through the formulation of low emission development strategies. This was rolled-out with accompanying extensive technical capacity building on the strategy development process, and training on the analysis, use and monitoring of climate-related data and information.¹²</p> <p>Since 2009, the Council of Australian Governments¹³ requires state and territory governments' strategic plans (including infrastructure needs) to address resilience by meeting specific criteria linked to climate change adaptation. The allocation of infrastructure funding is linked to meeting these criteria.</p> |

The effective implementation of many of the above mechanisms relies on the assumption that cities already possess the necessary skills and information to conduct robust vulnerability and risks assessments to inform their investment pipelines. A critical starting point for adopting similar tools, processes and policies is therefore to equip cities with tangible, targeted mechanisms to guide, capacitate and ultimately hold them accountable for improved climate responsive investments and planning processes. South Africa's Department of Environmental Affairs (DEA) has recognised this, as evidenced through:

- Their Local Government Climate Change Support Programme (LGCCSP). The joint DEA and GIZ initiative comprises an online platform of tools, templates and information sources that provide stakeholders with guidance on how to respond to climate change at a local level in South Africa. Specifically, the 'Let's Respond Toolkit'¹⁴ presents an overview how to integrate climate change into municipal planning processes by systematically considering risks, vulnerabilities and opportunities.
- The recent development of (draft) '*Minimum Standards for the Consideration of Environmental Aspects in the Preparation and Review of Municipal Spatial Development Frameworks (MSDF)*'¹⁵, which endeavours to formalise the overlay datasets required to inform spatial targeting and development – of which information linked to adaptation and mitigation form key dataset criteria:
 - Climate Change Vulnerability Assessments;

¹¹ Vertical Integration and Learning for Low Emission Development

¹² UNHABITAT Cities and Climate Change Initiative Bulletin: V-LED Project Promotes Multi-level Governance for Climate Change Actions, April 2018.

¹³ National Climate Change Adaptation Framework, Council of Australian Governments, April 2007

¹⁴ <http://www.letsrespondtoolkit.org/>

¹⁵ *Minimum Standards for the Consideration of Environmental Aspects in the Preparation and Review of Municipal Spatial Development Frameworks*; Department of Environmental Affairs, SANBI & Department of Rural Development and Land Reform (June 2018)

- Renewable Energy;
- Flooding; and
- Extreme weather prone areas.

Through formalisation of the MSDF's Minimum Standards, and corresponding wider roll-out and effective training on the LGCCSP tools, both National Treasury and DEA could consider introducing formal grant-related reporting mechanisms that are directly linked to the application of these tools. This recommendation is presented in more detail in Section 3, linking the need for consistent and robust risk and vulnerability assessment tools to specific grant conditions.

These efforts are reinforced by the recently gazetted Climate Change Bill (June 2018), which provides further evidence of DEA's intentions to imbed and build effective climate change responses within South Africa's wider framework of environmentally sustainable development.

2 EMERGING THEMES: WHAT'S WORKED, WHAT HASN'T, WHAT'S NEXT?

This chapter consolidates the key emerging themes drawn from a series of interviews with national and city officials, custodians and managers of the USDG, ICDG and PTNG¹⁶. These findings have informed the proposed recommendations and key considerations outlined in the following chapter.

Integration with the Current Reform Initiative

The on-going grant reform process presents an opportunity for mainstreaming climate responsiveness into grant conditions.

The effectiveness of several large grants falls short of desired targets. Whilst these funding envelopes have increased year-on-year, the rate and scale of delivery has not followed suit. This has led to the decision to reconsider the frameworks that underpin grants like the USDG and HSDG to determine what barriers are impeding progress and how their conditions can be restructured to better complement one another towards achieving a co-ordinated, desired future state. The Local Government Infrastructure Grants Review process - led by the Grant Reform Working Group - is a collaborative effort between the National Treasury, the Department of Cooperative Governance (DCoG), the Financial and Fiscal Commission (FFC), the South African Local Government Association (SALGA) and the Department of Planning, Monitoring and Evaluation (DPME).

Considering the significant, and increasingly prevalent, extreme weather events that South Africa is experiencing, this is an opportune time to introduce grant conditions focussed on mainstreaming climate responsiveness and resilience (CR&R) efforts into human settlement planning – especially in grants like the HSDG, which has not been amended since 1999 and does not reflect current concerns with CR&R.

The timing of this study therefore aligns well with imminent reform processes, and this window of opportunity to introduce change should be capitalised on by translating the recommendations in this report into targeted, practical actions. However, National Department and Treasury officials (responsible for administering grants) showed some reticence at the introduction of new grant conditions, given their concerns around the current technical and management capacities of some cities to respond to existing conditions. This doesn't negate or override the necessity for new CR&R conditions, rather it indicates the need to be circumspect, to ensure new conditions are contained, targeted and integrated into existing systems and frameworks.

Inherent Versus Additional Climate Resilience

Significant improvements in climate responsiveness can be achieved by 'getting the basics right' and ensuring climate resilient measures are inherent within strategic options analyses

¹⁶ See Annex D for list of interviewees.

and planning processes. Nevertheless, planners should also seek to identify opportunities for additional climate responsiveness to be integrated, as a preferred option is developed.

There has been a natural progression in increased investment in climate adaptation and mitigation measures in the energy, water, human settlements, and public transport sectors – both at national and city scales. For example, investment in renewable energy is now favourable from a financial perspective (although, arguably, not from the perspective of cities that depend on electricity sales to cover city operating costs) and reducing non-revenue water (NRW) levels through water loss reduction efforts is more economical than building new water storage facilities.

There are opportunities for cities to respond to climate change through adaptation and/or mitigation efforts in almost everything they do. While this may come at a short-term cost (either incremental or immediate), it is becoming easier to justify and quantify this investment due to the significant costs incurred in responding to climate change impacts – such as rebuilding damaged infrastructure, deploying emergency responses to affected vulnerable/informal areas, addressing the knock-on effects of increased crime rates over competition for stretched resources, etc. Ultimately, every capital investment, either in building new infrastructure or to rehabilitate old infrastructure, should have to answer the question: *does this investment maintain resilience, improve it or worsen it?*

Delivering projects that are inherently climate responsive can be most effectively and efficiently achieved through the consideration of options at a strategic planning level; if cities plan proactively, moving forward only on the basis of carefully evaluated alternative approaches to a particular decision, they will inherently deliver a degree of CR&R. So, in adhering to current grant conditions that demand financially efficient investment in infrastructure, many climate-related targets will be met. For example, a settlement plan focussed on improved densification as opposed to new greenfield developments on the edge of the city results in inherent climate efficiencies – it fosters improved public transport systems (reducing carbon emissions) and reduces the need for expansive power and water supply systems (reduced use of material and imbedded carbon, reducing O&M costs and the risk of water losses, theft and vandalism, etc.). It is important that cities understand and ‘own’ these inherent elements by understanding the wider implications of the right strategic choices, considering options early in a strategic planning process, monitoring implementation and reporting on them. Applying a strategic planning process grounded in the evaluation of costed options will thus ensure that cities adhere to current grant conditions that demand financially efficient investment in infrastructure, and this will lead to many climate-related targets being met.

However, given the intensity and variability of current and projected changes in climate, cities cannot only rely on the innate responsiveness that exists within their current planning and spending structures.

Catalytic projects as platforms for piloting CR&R initiatives

The BEPP catalytic land development programmes (CLDP) as possible entry points for demonstrating 'additionality'. This is because the catalytic project planning process has already fostered a mindset shift within some metros around the importance of cross-sectoral or intergovernmental, longer-term planning – which is key to conceptualising and implementing these 'additional' CR&R approaches.

The concept of *additionality*¹⁷ is key to developing innovative, incentive-based approaches that optimise a city's response to climate change. For example, a strategic planning choice that results in a public transport option being chosen over a road building option solely for the private car may deliver inherent climate responsiveness. However, by considering *additionality* planners may also stipulate that a new bus system procures electric or diesel hybrid engine busses to ensure the climate benefits are optimised.

Proactive Planning for Fiscal Sustainability

By adopting a 'smarter' approach to planning that proactively seeks to respond to expected climate change impacts, cities could make significant progress in integrating climate responsiveness into investments.

Cities deal with climate change impacts in an ad hoc, largely reactive manner with a short-term focus, where CR&R measures are only implemented after an extreme event has occurred. This is by and large due to two reasons: political cycles may foster a shorter-term vision around planning and delivery; and there is a heavy reliance on emergency funds, grants and concessional finance available during crises – essentially negating the incentive to invest in resilient designs, water demand management schemes, etc. That is, grants should be used to incentivise cities to address their own problems, rather than give them the resources to potentially ignore, or even worsen, existing problems (a clear risk of the Cape Town water crisis). This issue is coupled with a lack of guiding strategies on proactive responses to extreme events per city or per sector, meaning cities struggle to understand what their role is in implementing climate change preparedness measures.

And while one cannot discount the importance of providing cities with targeted and extensive capacity support and technical/scientific inputs, the long-term success and sustainability of city investments must be underpinned by a fundamental mindset shift from reactive to proactive planning.

Projects focussed on CR&R, or components of projects that introduce resilient elements, require better forms of finance, not necessarily *more* concessional finance or concessionary grants. Grants should be used to effectively leverage co-finance for these types of interventions. A pertinent example is that of water supply: cities should use their own water supply balance sheets and tariffing structures to finance

¹⁷ The term *additionality* is used in a number of ways in the context of climate finance. Given climate finance avoids funding traditional development projects without a clearly articulated additional climate benefit, it is often necessary to emphasise / clearly state what 'extra' expense will be incurred by making a project climate responsive, over and above a standard non-climate responsive option for the project.

water interventions based on proper pricing models. Grants should not be used to mute the pricing incentive to allow municipalities to put off necessary steps to manage water demand better.

Implementing and Embedding Change Takes Time

As with the introduction of any new grant condition(s), cities require time and sufficient support to effectively understand and integrate climate responsiveness into their existing systems.

Embedding change within the grant reform process is a major hurdle; many officials still default to old rules, and this can feed through to the actual process, which, in practice can sometimes be difficult to change. Amending or introducing new conditions on paper is relatively straight forward from a procedural perspective, but behavioural change takes longer and requires a stronger hand to effectively roll-out and manage.

*“Adaptation is more than physical ‘climate proofing’; it is a dynamic, iterative, cross-sectoral and open-ended planning and implementation process that requires political, institutional and financial support, as well as **behavioural change**.”*
UNFCCC, 2018

This means it is too big of a leap to introduce performance-based incentives around CR&R in a single step. cities will first require substantial support in understanding the importance of holistic practical guidance regarding operationalising climate resilience – that is, entrenching an understanding at all levels of

government that CR&R will not impede or derail progress, but rather enhance the sustainability and impact of investments.

In addition, policy changes will help underpin grant reform but cannot always be written directly into grant frameworks. The relevant sector department first needs to develop appropriate policies and then provide the necessary expertise to advise on how this influences grant conditions to operationalise the policy. This critical step needs to be factored into grant reform processes.

Understanding the Role of the Incentive

Incentive components of grants cannot be implemented without a clear understanding of the context and capacity of a city.

The level of ambition with respect to incentive-based grant conditions must be clear. Working within the capacity of the sector and city is crucial, with the assumption that this capacity can be built to some extent through targeted support. Likewise, targets must be context specific – if a city is still struggling to meet basic conditions, it is unrealistic to establish additional performance-based criteria.

The ICDG's basic conditions that inform the final allocation include: quality of the BEPP (based on an external evaluation), status of their audit, level of wasteful expenditure, and achievement of governance and staffing targets. In the grant's first year of implementation, several cities (including the City of Johannesburg) failed to meet the audit-related condition, and as such their original allocation was reduced. The following year, the

The ‘Gate-Pie-Cherry’ Grant Structure

- **Gate:** do you meet basic grant conditions?
- **Pie:** how much do you get? (formula based)
- **Cherry:** what is the incentive component?

outcomes of these cities' audits improved – illustrating the level of influence that even a relatively small grant can have on incentivising behavioural changes.

However, for larger grants - where a reduction in allocation has significant implications and could impede the development of a sector (such as Public Transport or Housing) - the ICDG's 'hard' approach to meeting basic criteria cannot be applied, and a phased approach to introducing incentive conditions is preferable. One must ask: how do you agree on an appropriate incentive if cities are still struggling to get the basics right?

However, the flip side of focussing too much on meeting basic 'gate' criteria could be that cities lose sight of the importance of optimising operations. Efficiency and effectiveness levels should therefore be part of the 'pie' component; with the 'cherry' reserved for innovation. As cities learn to respond positively to incentives, the 'cherry' can be used to drive innovation and encourage 'out-of-the-box' thinking, with the flexibility to deploy additional funds made available through the grant to maximise climate responsiveness.

Efforts are underway to develop and introduce an incentive component into the PTNG. This process has been informed by how cities are currently performing against basic qualifying criteria and 'gate' grant conditions, to ensure the indicators are achievable and will also drive best practice and behaviour change. This process provides a good model for ultimately introducing climate-focussed incentives and related indicators. For the PTNG specifically, a phased approach could be adopted whereby one of the proposed PTNG indicators (which already contain a degree of inherent climate resilience) could be adapted to measure climate performance (e.g. passenger trips: passenger kilometre per week / CO₂ grams per passenger kilometre).

Scale and Ambition: Getting the Balance Right

Incentive components linked to CR&R within grant frameworks could be a mechanism to drive innovation and behavioural change. But, incentives are also not a silver bullet; they are useful at the margin where additional influence or pressure is required to ignite more fundamental shift.

Access to small incentive grants encourages innovation and provides the flexibility to experiment with new concepts, but, their relatively small scale means they can't swing behaviour at a city scale. Similarly, nuanced changes to existing conditions have limited impact, whereas introducing hard constraints coupled with technical support proves more successful.

Drawing on the ICDG experience, if the actual grant (and subsequent proportion of grant that is incentive-based) is too small, the incentive component cannot be attributed as the key driver of changes to planning and implementation behaviours, because there are too many equally influential factors at play.

The benefit of the ICDG approach is that cities now understand the incentives concept and are requesting an increase in the size of the grant (and associated incentives). For cities, the significant amount of work required to meet incentive targets is hard to justify, given the relatively low upper ceiling

of ICDG funding. Cities have articulated confidence in meeting incentive targets for a bigger grant, like the USDG; a larger financial incentive encourages them more to achieve stretch targets.

Overcoming Organisational Complexities

Working in the cities and climate space requires multisectoral and multidimensional responses and demands significant collaboration amongst range of stakeholders; this is currently a major challenge across public sector institutions.

Silos and institutional barriers exist at all levels of public sector structures: within metros; between metros and provinces; between Treasury and metros; between national Departments; and between Treasury and the national departments that disburse funds.

This fragmentation substantially hinders the effective and efficient use of available funds. Improved co-ordination needs to span the metros, provinces, Treasury and the relevant national departments (for example, Human Settlements, Transport, Water, Environment, Energy and Agriculture) to ensure that available resources can be maximised and allocated effectively and reporting against targets is aligned rather than repeated or forgotten. So, by way of example, a climate resilient intervention funded under USDG would likely also contribute to targets set by Department of Environmental Affairs, as well as those of the grant's parent department, Human Settlements— and these links must be recognised and accurately attributed.

Treasury officials may be hesitant to engage the deeper structures and political landscapes that exist at municipal level, given that their primary focus is on core financial issues. This can result in funds being diverted from originally allocated interventions, and those held accountable for progress against these are often not given the authority to manage the funds. This results in internal tugs of war, and ineffective spending.

There is insufficient capacity and participation of climate specialists in critical strategic decision-making positions to ensure the effective integration of climate responsiveness in city planning and budgeting.

There is still a way to go in terms of cities grasping the extent and severity of risks associated with not considering CR&R over short, medium and long-term horizons. This requires significant attention in terms of providing targeted, tailored support and in-house climate and vulnerability expertise (and giving these experts the capacity and opportunity to influence spending priorities).

There is a dearth of critical skills required to operationalise CR&R mainstreaming efforts, and where these skills exist, the individuals are not sufficiently empowered to influence planning and spending priorities. The CIDMS (City Infrastructure Delivery and Management System) is a prime example of this shortfall – the process underpinning it does not specify who should attend strategic planning meetings on infrastructure asset management and procurement. This means criteria around environmental sustainability could be decided upon by non-specialists and without correct/consistent baseline information.

However, this issue extends beyond weak climate change and disaster risk reduction expertise and it includes weak project management skills. Because climate is a cross-cutting issue, it is critical that there be overarching co-ordination at multi-levels within government, and between all sectors and departments involved in the process to ensure budget, designated responsibilities and targets correlate with plans, implementation and M&E.

UNFCCC's February 2018 Report on *Adaptation in Human Settlements: Key Findings and Way Forward* focussed heavily on the importance of establishing multi-level governance systems and continuously strengthening both vertical integration processes (planning, management, M&E) and local-government capacity. To achieve this, National Government must be held responsible for:

- Defining, and ensuring adherence to, clear roles and reporting processes within and between governance levels; and
- Supporting the production and dissemination of reliable, consistent data, as well as education, capacity-building and research – with a view to providing actionable information on CR&R interventions and targets for use by local policy and decision makers.

Looking Beyond Grant Conditions: Additional Mechanisms to Incentivise Change

Amending grant conditions must go hand in hand with both relevant line department's policy changes, and the provision of time, resources and support required to allow cities to respond to the changes.

Built Environment Performance Plan: Guidelines

Amending BEPP guidelines to explicitly reference CR&R measures will be an effective entry point to igniting behavioural change. However, climate needs to be woven into the BEPP appropriately; it needs to be aligned with the core focus and structure of the BEPP, but also be substantive enough to avoid cities only paying lip service to the concept. As alluded to earlier, catalytic projects and programmes in the BEPP are obvious routes for mainstreaming CR&R, as they are intended to be strategic, multi-sector and multi-year.

Affording cities time to learn and practice integrating CR&R into their planning through the BEPP process prior to embedding harder conditions in grant frameworks will lead to better performance outcomes and less reactive planning processes. However, 'funds follow function' and as such, amendments to BEPP guidelines must be done in parallel with changes to grant conditions and related indicators. Grant conditions and targets must speak to the aspirations in the BEPP guidelines to avoid confusion at a metro level.

Budget Facility for Infrastructure (BFI): Scoring Criteria

National Treasury is working jointly with the Presidential Infrastructure Coordinating Commission (PICC) secretariat, the Departments of Planning, Monitoring and Evaluation (DPME) and Economic Development (EDD) to establish the Budget Facility for Infrastructure (BFI). The Facility will provide

funding for large and strategic interventions, which are expected to present substantial long-term benefits. Proposals will be evaluated by the Ministers Committee on the Budget and the Medium-Term Expenditure Committee against a set of criteria comprising the project's value-for-money, socio-economic rationale, affordability, and risk profile. Proposals must also contain a summary of other options that could achieve the same objectives, and an explanation of the preferred choice. The first tranche of BFI funding has already been allocated to 38 projects that meet the existing BFI criteria, with a further call for proposals underway. Given the scale and intended impact of such projects, climate resilient considerations *must* form a key component of the appraisal process, and there is opportunity to influence this prior to the 2019 budget process (i.e. projects submitted for 2019/20 to 2022/23). Specifically, it is recommended that Treasury, PICC, DPME and EDD expand: i) the risk criteria to explicitly consider current and future climate risks, and how the proposed project has been designed to respond to these; and ii) the options summary to indicate the *additionality* (adaptation or mitigation elements) of the preferred option. The first port of call for directing these recommendations is National Treasury's Infrastructure Finance Division (Budget Office), given they work directly on the BFI assessments and allocations.

City Infrastructure Delivery and Management System (CIDMS)

The CIDMS has been developed based on the already established Infrastructure Delivery Management System. It aims to ensure that city infrastructure owners record all infrastructure assets and manage them according to a set of nine principles. There is scope to update and amend the principles to address climate responsiveness concerns more directly¹⁸, most likely the 'environmental sustainability' principle, which currently only touches on carbon emissions, ecosystems and biodiversity. This will largely rely on amending and establishing new national codes and policies that speak to issues of flood risk ratings, vulnerability assessments, green building conditions, etc. The climate resilience of infrastructure is a key to its longevity and thus the costs of operations and maintenance, hence the direct relevance of the CIDMS to climate resilience (and of climate resilience to the CIDMS).

Non-Monetary Incentives

The Department of Human Settlements presents Govern Mbeki awards to high performing cities, a recognition-based incentive rather than a monetary one. Cities have historically responded well to it; a possible 'soft' test to gauge cities' potential to respond to climate-focussed incentives could be to include this as a category in the awards.

Avoiding Perverse Outcomes

Robust guidance must accompany the incorporation of climate responsiveness in grant conditions if perverse or maladaptive outcomes are to be avoided.

Targeted, well-structured conditions and guidelines are critical to ensuring that desired outcomes are achieved. The risk of cities focussing solely on new mitigation and adaptation investments without considering the importance of also refurbishing and rehabilitating existing infrastructure and systems could limit the effectiveness of a city's overarching CR&R efforts. In addition, maladaptation must be

¹⁸ Specific recommendations linked to the CIDMS process are detailed in the draft BEPP Guidance Note

avoided; developing integrated design approaches that consider temporal and spatial horizons (beyond short term and immediate/formal cities boundaries) helps to manage risk and avoid fostering short term CR&R, while undercutting the long-term adaptive capacity of a system¹⁹. An inherent part of capital subsidies is that cities have to draw on their own funds to cover O&M, and this places a heavy responsibility on them to accurately plan and manage the process of reinvestment in existing infrastructure. Failing to do so, would give rise to the perverse outcome of infrastructure deteriorating well before its usual lifespan.

The experience of the PTNG demonstrated that 100% capital subsidy can give rise to overstating and under-analysing future revenue. Recognising this, the PTNG conditions were subsequently adapted to place increased emphasis on the importance of implementing measures to ensure the financial sustainability of the infrastructure.

Progress in upgrading informal settlements has been slow; the process is often delayed by negotiations over land tenure and rights issues, challenges with access to planned services etc. It is far easier to deploy capital subsidies to procure greenfield land for new housing developments on peripheral sites, driving an unsustainable urban form while generating increased vehicle emissions. Without the right incentives and conditions in place, the focus on new housing projects will continue to supersede informal settlement upgrading – often to the detriment of a city's CR&R efforts.

Indicators – Scope to Expand?

Despite the important role that indicators should play in managing the effectiveness of climate responsiveness in the city planning and budgeting, they need to be carefully developed within the wider context of rationalising the reporting requirements for cities.

Indicators are critical to managing progress and measuring impact, and cities are therefore required to report against a significant number of them. However, the data and information generated from this process is not being fully utilised, and this calls into question the efficacy of the existing sets of indicators. This issue has been recognised, and there is an on-going process to rationalise and streamline them, with a view to developing fewer, targeted indicators. However, it would be fruitless to introduce CR&R grant conditions without developing appropriate indicators to measure impact and it is therefore important to consider appropriate means of doing so, whilst also ensuring alignment with the broader rationalisation process. A review of the Sustainable City Indicators suggested that the current BEPP indicators leave room for more robust development of climate change focused targets, and that there would be value in developing new indicators that speak to these issues at a city level to ensure the BEPP indicators reflect a stronger emphasis on climate change response.

However, from more recent engagements there is a strong sense that greater impact will be achieved by fine tuning and redesigning existing cities' indicators, as opposed to introducing entirely new sets. It was noted that there are existing indicators in the BEPP that one could work with, with a view to tightening them to explicitly enforce resilient approaches, and a detailed set of proposals has therefore been developed in the background document to the BEPP Supplementary Guidance Note. Interviewees

¹⁹ UNFCCC, Adaptation in human settlements: key findings and way forward, 19 February 2018.

also voiced concern about the challenge of translating climate change projections into actionable, measurable interventions that can be understood by non-experts. This links with the need to accompany any climate resilience related indicators with clear methods for quantifying the related resilience/sustainability benefits, using existing, appropriate baseline data that is accessible to cities. This allows cities to incrementally build, develop and scale-up capacity from a sound and informed decision base (of what they already have and know). A team of skilled climate auditors²⁰ and operational experts would need to be assigned to accurately monitor performance and maintain pressure on cities to abide by targets.

The first report delivered under this project, '*Climate Mainstreaming in South African Cities: High-level Analysis of Key Strategic Planning Documents*', identified a series of steps towards improving the BEPP indicators to better reflect CR&R. The steps focussed on preparing, clustering and shortlisting potential climate change related indicators, cross-referencing them against existing sets, and then selecting those which best reflected critical CR&R measures and incorporating them into the BEPP process. These steps largely remain valid, although the focus should rather be on identifying where there is scope within existing indicators to integrate climate change responses (both adaptation and mitigation-related), rather than designing and introducing entirely new ones. The report also advised that the process of refining climate change indicators should not be done in isolation of city governments. Engaging cities early in the process and ensuring they understand the motives behind the proposed changes ensures greater uptake further down the line, when the revised conditions and indicators are formally introduced.

Key Takeaways from the Emerging Themes

The revision of grant frameworks to foster behavioural change at a city level, is not without its challenges. Whilst all interviewees were highly receptive to the concept of using the grant system to encourage, and ultimately hold cities more accountable for, resilient and responsive planning, management and implementation of public funds, the process requires effective transversal co-ordination across sectors and within the cities themselves. It will also rely on improved oversight and support from National Treasury – specifically with regards to providing capacity support and embedding and empowering appropriate expertise within municipalities to guide the project planning process (from conceptualisation through to monitoring and evaluation).

Critically, this process cannot be seen as a standalone or short-term intervention; rather, it is a key component of a wider effort by Treasury to mainstream climate resilience and responsiveness into the suite of city budgetary and planning instruments ensuring the identification and prioritisation of key areas of investment are informed by current and anticipated climate change impacts. Therefore, in addition to considering grant frameworks as mechanisms to influence improved climate resilience investment, other instruments such as the MSDF, BEPP Guidelines (and related indicators), CIDMS and BFI all present clear opportunities to mainstream climate responsiveness and resilience into their frameworks and assessment criteria. Mainstreaming climate resilience considerations into each of

²⁰ Responsible for tracking and verifying cities' compliance with CR&R conditions and requirements (e.g. conducting GHG emission inventory assessments)

these instruments should be done in a co-ordinated manner, tempered to the current capacity of cities, aligned to appropriate new/revised sectoral policies, and most importantly complementary to one another.

Another fundamental issue that remains a current challenge across departments, but which will be critical to the effective implementation of proposed changes to grant conditions (and related city-level planning and budgetary tools), is the lack of consistent, reliable baseline data and standardised protocols that guide the nature, level and extent of climate risk and vulnerability assessments required to both fulfil grant submission criteria and respond to related reporting processes. Whilst there is evidence of DEA already tackling these concerns (detailed in Section 2), this must be underpinned by comprehensive sector plans developed by key line departments (such as Transport, Human Settlements and Water Affairs) to inform strategic planning, and ultimately influence grant-funded prioritised areas of expenditure.

These key issues have informed the grant condition analyses and recommendations detailed in the following section.

3 GRANT CONDITION ANALYSIS

3.1 METHODOLOGY

Recognising the need to be circumspect and targeted in developing new/amended conditions, the framework of analysis developed during the first phase of this project (Annex B) has been used as a basis for assessing the extent of, and potential to introduce, climate resilient and responsive considerations in existing grants. The conditions, outcomes and outputs of the USDG, PTNG and ICDG have been analysed against the framework's guiding factors. The scope and nature of new/amended conditions have been informed by Section 1.3's international experience examples (and how these learnings are already being adapted to the South African context) and Section 2's key emerging themes. The proposed changes are intended to supplement the recommendations contained in the background report to the BEPP Supplementary Guidance Note, which aims to promote prioritised programmes of investment around key functional areas. In line with this, the proposed changes centre around four key definitional and operational (planning, reporting and monitoring) areas:

- Introduction of explicit climate resilient and responsive **research, analysis, reporting and monitoring processes**.
 - This includes standardised risk and vulnerability assessment processes and protocols, as agreed upon, and under the guidance of, the Department of Environmental Affairs and the National Disaster Management Centre.
- **Promotion of densification** as well as investment in the preservation and expansion of urban blue and green spaces²¹. Where:
 - Blue space is understood as the (re)introduction of water cycles into urban spaces to manage fluvial, pluvial and coastal flooding, whilst generating benefits to the surrounding environment and society; and
 - Green space is understood as open areas of vegetation, providing environmental and social benefits through their effects on negating urban heat, offsetting greenhouse gas emissions, and attenuating storm water.²²
- Ring-fencing a portion of the funds already allocated to capacity building within each grant to **procure capacity for the identification and development of credible, feasible climate resilient projects**.

²¹ It is recognised that planning and investment in blue and green spaces is already imbedded within national norms and standards; the intention of explicitly referencing it within these recommendations is to ensure that cities make the connection between the need for such spaces and improved resilience to climate impacts.

²² Keng Lee, A.C., Jordan, H.C., Horsley, J. *Value of urban green spaces in promoting healthy living and wellbeing: prospects for planning*, 2015.

- Identification of city-specific ‘**climate risk zones**’ as priority areas of intervention, aligned to both the Disaster Management Act (2002) and recently gazetted Climate Change Bill (2018). The aim of these zones is to highlight and prioritise areas at highest risk from climate change impacts, and to inform the required investment to respond to these risks. The intention of this adaptation-focussed approach is to ensure (and improve) the durability, sustainability and resilience of grant-funded infrastructure.
- It must be recognised that a focus on ‘climate risk zones’ may dilute investment in integration zones in instances where these zones do not align (e.g. investing in flood defence mechanisms, where the source of a flood is in a higher income area). In these instances, a motivation for this investment would be required to reflect the clear downstream benefits that would accrue within an integration zone as a result of the ‘upstream’ investment.

The individual grant analyses are captured in Table 3, Table 4 and Table 5. A traffic light system has been applied to the second column of each table to indicate alignment between the grants and guiding CR&R factors, where there is:

- No alignment (**RED**);
- Potential scope for alignment (**YELLOW**); or
- Explicit alignment (**GREEN**).
- Factors that are not applicable to the grant’s framework/context are indicated with a strikethrough.

Where there is scope for alignment, where clear gaps exist, or where conditions/outputs/outcomes have the potential to drive unsustainable (or maladaptive) approaches, new and amended conditions have been recommended. Taking cognisance of the need to support cities in leveraging climate finance (by ensuring planning and investment processes meet climate funding criteria), these recommendations have also been developed to align with generic climate finance conditions – providing further motivation for their adoption.

These recommendations are then defined according to their potential (relative) time implications, and resource requirements as a means of diagrammatically categorising and prioritising proposed changes (Figure 1). It must be noted that the adoption of the selected changes will necessitate revisions of the responsibilities of both transferring and receiving officers.

3.2 ANALYSIS AND RECOMMENDATIONS

Table 3: Analysis and Indicative Changes of USDG Outcomes, Outputs, and Conditions

| Guiding CR&R Factors | Alignment of CR&R factors with current grant outcomes, outputs and conditions | Proposed changes to outcomes, outputs and conditions | | Time ²³ | Resources ²⁴ | Links to generic climate finance criteria |
|--|---|--|---|--------------------|-------------------------|---|
| | | Amendment / Addition | Key considerations | | | |
| URBAN SETTLEMENTS DEVELOPMENT GRANT | | | | | | |
| Takes into account climate change vulnerabilities and risks in the municipality during the lifespan of the planning instrument | <i>'Improving the sustainability of livelihoods'</i> is a key consideration at an outcome level. Climate-related vulnerabilities and risks should inherently be accounted for through this outcome. However, given the potential implications of climate hazards on 'sustainable livelihoods' – particularly in informal settlements where adaptive capacity is low – the grant's outcome statements must emphasise the importance of <i>climate resilient</i> development. | Outcome Amendments: <ul style="list-style-type: none"><i>'Ensure the provision of climate resilient, low carbon infrastructure for mixed income and mixed-use developments...'</i><i>'Improving the sustainability and resilience of the livelihoods of poor households...'</i> | Climate adaptation and mitigation considerations should be incorporated into the prioritization of options for infrastructure designs at an early pre-feasibility stage. This should be aligned to the aforementioned CIDMS recommendations, where a climate expert should be embedded within decision-making and governance structures to review, refine and increase the capacity of cities to develop pipelines of CR&R projects. | S-M | RL | Being able to demonstrate that non-climate responsive options were considered and rejected in favour or a more climate responsive approach is important in demonstrating "additionality". That is, how is the project different from business as usual? It also helps set the baseline for emission reductions or addressing climate vulnerabilities. |
| Identifies specific municipal assets and services likely to face the greatest impact from climate change | The USDG annual performance matrix, which requires reporting on assets (including project lists, classification of infrastructure, GIS data, etc.), should be expanded to report on the potential impact that climate events could have on the condition of assets. Linked to this, the annual reporting process also includes a motivation on the project's | Condition Amendment: <ul style="list-style-type: none"><i>'Municipalities must submit an annual USDG performance matrix containing a project list with project names, project descriptions, classification of infrastructure, project-level emissions & energy efficiency assessments, project-level</i> | The USAID CLEER tool (Clean Energy Emission Reduction) could be used as a basis for the emissions reporting process. This will require: capacity support (building on the initial training recently provided to municipalities), baseline and target setting of GHG emissions (per sector), alignment with BEPP | M | RI | Important baseline information on vulnerabilities which a specific project is designed to address is important to demonstrate Impact potential to the Green Climate Fund. A core aspect of this is setting GHG and energy baselines which can be used to estimate, |

²³ Time represented as: **S** = short term, **M** = medium term, **L** = long term

²⁴ Resources represented as: **RL** = resource-light (minimal capacity building & external support required); **RI** = resource intensive (significant capacity building & external support & data/information required)

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| | benefits. This should contain a clear CR&R element requiring metros to demonstrate how climate projections, and actual and projected capacity have been factored into the design and operation of the asset ²⁵ . | <i>climate change risk and vulnerability assessments, GIS coordinates...The submission should include motivations of how the project will benefit poor households, contribute to reducing climate risks and vulnerabilities...</i> | reporting processes, and on-going oversight from DEA. Cities must also be equipped with standardised climate risk and vulnerability assessment protocols and guidance (under the guidance of, and as agreed by, DEA and NDMC) – aligned to DEA’s Cities Resilience Programme and LGCCSP tools. The level of detail of the assessment should be based on established thresholds (based on the size and type of development). The guidance must align with BEPP guidelines, CSIR green book [in draft] and relevant SABS and SANAS green building standards. | | | measure and quantify mitigation benefits. |
| Takes into account major sources of greenhouse gas emissions from within the municipality within the domain of the planning instrument | | See above Condition Amendment | The standardised tools will be more resource efficient and deliver consistency in approach and analysis for applications from South African cities. | | | Baseline information on current vulnerabilities and or emission are important to be able to calculate how a project will contribute to adapting to or mitigating climate risks. |
| Articulates relevant objectives or the desired outcomes of responding to climate change (adaptation and/or mitigation) | Outcomes refer to interventions that contain inherent CR&R components – promoting a focus on: <ul style="list-style-type: none"> <i>densification and transit-oriented projects</i> <i>increased acquisition and availability of well-located land</i> | Output Amendments: <ul style="list-style-type: none"> <i>‘increase low emission bulk infrastructure capacity designed to withstand projected impacts of climate change’</i> <i>‘increase in land provision...in support of approved human settlement developments, and taking into account climate</i> | The standardised tools outlined above should guide the steps required to operationalise these changes, through appropriate planning and design options that respond to identified risks and promote additionality in project design. The proposed condition and output amendments can be introduced in parallel, but only once the standardised tools have been | M | RI | It is important to demonstrate clear, climate responsiveness outputs at a project level – translating the aforementioned performance matrix information into tangible project interventions. |
| Contains (or directly supports) projects that are responsive to climate risks and vulnerabilities and help achieve the articulated adaptation outcomes | However, there is a need to explicitly integrate climate risk and vulnerability considerations at an output level. This will avoid potential maladaptive approaches (i.e. | | | | | |

²⁵ Similar to the UK’s National Policy Statement reporting process

| | | | | | | |
|---|---|--|--|----------|-----------|--|
| | at an output level it is implied that 'well-located' land includes <i>greenfield sites</i> – this presents a risk, as the site could be susceptible to flooding, or impact on wetland/natural ecosystem functioning (that likely contributes to reducing flood risk in an area)). | <p><i>change, emissions, risks and vulnerabilities'</i></p> <ul style="list-style-type: none"> 'improved dwelling unit densities within an approved human settlements spatial integration framework, <i>and through the provision of sufficient green and blue space</i>²⁶, and storm water retention facilities' | developed and the necessary capacity building has been provided regarding understanding and application of the tools. | | | |
| Contains (or directly supports) projects that target greenhouse gas emissions levels and help achieve the articulated mitigation outcomes | <ul style="list-style-type: none"> If designed properly, the abovementioned <i>densification and transit-oriented</i> projects should directly contribute to reduced GHG emissions. Within the grant conditions, the annual USDG performance matrix criteria should be amended to explicitly require reporting on GHG emissions²⁷. Reporting should extend to catalytic, energy, waste and water supply interventions. | See first Condition Amendment | Conditions need to specify a GHG emission baseline and potential reduction calculation, as well as a renewable energy strategy for new housing developments over a minimum size (in line with national building standards and the green book). | | | |
| Reflects formal commitment and political buy-in at the municipal level for climate change response | | <p>Condition Addition:</p> <p><i>10 per cent of the 3 per cent allocated to capacity building must be used to procure capacity to ensure all grant-funded infrastructure contributes to resilience, by responding to and reducing risks and vulnerabilities.</i></p> | Cities should receive guidance on desired expertise and expected scope of work required for such capacity support. The support should entail a component of in-house capacity building to ensure the necessary skills are ultimately imbedded in the city. | S | RL | It is important to demonstrate sustainability of project interventions in GCF applications, and especially how institutions will implement and maintain climate resilience elements. |
| Estimates and/or earmarks additional investment and finance needed for climate change elements of the | <p>External finance is recognised in the grant conditions and at an outcome level, but lacks explicit links to climate-focussed funding:</p> <ul style="list-style-type: none"> Outcome: '<i>ensuring the provision of infrastructure for mixed income and</i> | <p><i>As recognised in the draft GCF Access Report, key to unlocking climate finance is the ability to demonstrate a certain level of climate resilience and responsiveness within an institution's existing capacity, planning and policies. The phased recommendations in draft BEPP Guidance Note are therefore designed to support South African cities in improving their ability to demonstrate this. Therefore, until sufficient/successful roll-out and uptake of these recommendations, it would be premature to introduce climate finance-focussed conditions into grant frameworks.</i></p> | | | | |

²⁶ Aligned to existing national Housing Norms and Standards

²⁷ Similar to the Queensland Local Government Grants for Infrastructure system

| | | |
|---|--|--|
| instrument, above business-as-usual allocations | <p><i>mixed-use developments to support leveraging private finance and non-state sector grants and funding... in support of catalytic projects'</i></p> <ul style="list-style-type: none"> • Condition: <i>Annual USDG performance matrices must motivate how USDG-funded projects contribute to co-funding opportunities</i> | |
|---|--|--|

Table 4: Analysis and Indicative Changes of PTNG Outcomes, Outputs, and Conditions

| Guiding CR&R Factors | Alignment of CR&R factors with current grant outcomes, outputs and conditions | Proposed changes to outcomes, outputs and conditions | | Time | Resources | Links to generic climate finance criteria |
|--|---|---|---|-------------------|-----------|--|
| | | Amendment / Addition | Key considerations | | | |
| PUBLIC TRANSPORT NETWORK GRANT | | | | | | |
| Takes into account climate change vulnerabilities and risks in the municipality during the lifespan of the planning instrument | | Addressed in the Output and Condition additions below. | | | | |
| Identifies specific municipal assets and services likely to face the greatest impact from climate change | | | | | | |
| Takes into account major sources of greenhouse gas emissions from within the municipality within the domain of the planning instrument | Whilst the outcomes, outputs and conditions do not directly refer to the GHG contributions of PTNG-funded developments, the grant's focus on spatially efficient, energy efficient, low carbon networks and technology solutions inherently infer that municipalities are considering the implications that public transport has on GHG emissions at a city level. These actions are considered climate change mitigation responses, and this should be explicitly recognised at an Output level as a measurable target. | Output Addition: <i>Public transport network contribution to reduced CO₂ emissions</i> | Will require a baseline CO ₂ emissions assessment of current public transport network levels, and the establishment of a process to track and monitor change. This must be accompanied with the necessary capacity building support to ensure cities are equipped to measure and report on this output. Oversight from DEA will necessary to ensure reporting consistencies across metros. Measuring CO ₂ is best done through Grams of CO ₂ per passenger Km. The grant's incentive component currently under development could | S-M ²⁸ | RI | Public transport presents an opportunity to foster low carbon, resilient and spatially efficient solutions at scale. Transport is also a key impact area for the GCF, and CO2 emissions baselines are critical for GCF applications and future measure reporting and verification. |
| Articulates relevant objectives or the desired outcomes of responding to climate change (adaptation and/or mitigation) | | | | | | |

²⁸ Instinctively, this output addition should be achievable within a shorter-term horizon given the progressive nature of many large cities' public transport systems (e.g. Gautrain and Bus Rapid Transit). However, the Department of Transport has indicated significant challenges linked to consistent baseline data availability, and this data is critical to informing the development of indicators that drive climate resilience.

| | | | | | | |
|--|--|--|---|---|----|--|
| | | | ultimately be adapted to incentivise behavioural change around GHG emission reductions, by introducing an indicator on 'passenger trips: passenger kilometre per week'. However, the introduction of such an indicator would need to be phased – pending the successful uptake of the current planned indicators. | | | |
| Contains (or directly supports) projects that are responsive to climate risks and vulnerabilities and help achieve the articulated adaptation outcomes | | <p>In the same vein as the current condition on 'all public transport infrastructure funded through this grant must consider <i>provisions for special category passengers</i>', it is recommended that another condition addition be:</p> <p>All public transport infrastructure funded through this grant must consider the impacts of current and future climate change.</p> | <p>Compliance with this proposed condition may result in additional costs being incurred. However, the benefits of meeting the condition should justify (and outweigh) the additional costs.</p> <p>Fulfilment of the condition will require the completion of a climate risk assessment to inform potential design responses to the climate impacts. Cities must therefore be equipped with standardised climate risk and vulnerability assessment protocols and guidance, and associated capacity building support to operationalise these. The development of these tools should align with DEA's existing LGCCSP's efforts (the 'Let's Respond Toolkit') and in coordination with their Cities Resilience Programme. It should also be done at a city level, in parallel with the proposed standardised tools for the USDG.</p> | M | RI | Identifying vulnerabilities and risks through a scientifically robust process, and using this as a basis to demonstrate how the project addresses/responds to these, will significantly strengthen an application for climate finance. |
| Contains (or directly supports) projects that target greenhouse | The grant directly supports developments that contribute to improved energy efficiency | | | | | |

| | | | | | | |
|---|---|--|--|--|--|--|
| gas emissions levels and help achieve the articulated mitigation outcomes | <p>and decreased GHG emissions – specifically by promoting:</p> <ul style="list-style-type: none"> public transport options over single/private passenger vehicles (i.e. Output focussed on passengers per network vehicle per average weekday; Condition focussed on prioritising and incentivising public transport and non-motorised transport) non-motorised transport infrastructure integrated, efficient transit-oriented networks | | | | | |
| Reflects formal commitment and political buy-in at the municipal level for climate change response | | | | | | |
| Estimates and/or earmarks additional investment and finance needed for climate change elements of the instrument, above business-as-usual allocations | | <p><i>As recognised in the draft GCF Access Report, key to unlocking climate finance is the ability to demonstrate a certain level of climate resilience and responsiveness within an institution's existing capacity, planning and policies. The phased recommendations in draft BEPP Guidance Note are therefore designed to support South African cities in improving their ability to demonstrate this. Therefore, until sufficient/successful roll-out and uptake of these recommendations, it would be premature to introduce climate finance-focussed conditions into grant frameworks.</i></p> | | | | |

Table 5: Analysis and Indicative Changes of ICDG Outcomes, Outputs, and Conditions

| Guiding CR&R Factors | Alignment of CR&R factors with current grant outcomes, outputs and conditions | Proposed changes to outcomes, outputs and conditions | | Time | Resources | Links to generic climate finance criteria |
|--|--|--|---|------|-----------|---|
| | | Amendment / Addition | Key considerations | | | |
| INTEGRATED CITY DEVELOPMENT GRANT | | | | | | |
| Takes into account climate change vulnerabilities and risks in the municipality during the lifespan of the planning instrument | <p>The grant's overarching strategic goal is '<i>the development of more inclusive, liveable, productive and sustainable urban built environments</i>'. Key to achieving this is the implementation of climate resilient interventions that respond to current and projected climate-related vulnerabilities and risks.</p> <p>There is scope to make this more explicit at an outcome level, and embed it within the outputs and grant conditions, to ensure cities ultimately adopt the longer-term, holistic planning and investment processes envisaged for this grant – and in support of the amended BEPP guidelines and indicators.</p> | <p>Outcome Amendment:</p> <p><i>'Improved spatial targeting and sequencing of public investments in the urban built environment to achieve a more compact, inclusive, productive, climate resilient and sustainable urban spatial form.'</i></p> | Embedding this issue at an output and condition level is reflected further down in this table, through the inclusion of ' <i>climate risk zones</i> ' as priority areas for intervention. The intention is to ensure that areas of a city that are vulnerable (or expected to become vulnerable) to climate change receive targeted attention (e.g. coastal / low-lying areas). This is a far-reaching change to the current focus of the ICDG (and other grants) on integration zones – however it aligns with DEA's current efforts on improved spatial targeting in cities and the draft BEPP Guidance Note's corresponding emphasis on identifying, prioritising and addressing areas considered at high risk of climate impacts. | M | RI | |
| Identifies specific municipal assets and services likely to face the greatest impact from climate change | | See inclusion of 'climate risk zones' in Output & Condition Amendments below. | | | | |
| Takes into account major sources of greenhouse gas emissions from within the municipality within the domain of the planning instrument | | See Condition Amendment on 'specified activities' below. | | | | |

| | | | | | | |
|--|--|--|--|------|----|---|
| Articulates relevant objectives or the desired outcomes of responding to climate change (adaptation and/or mitigation) | <p>The project outcomes include <i>improved spatial targeting and sequencing of investments</i> with a view to encouraging strategic, integrated planning. If done properly, this approach should foster the implementation of interventions that are inherently CR&R.</p> <p>However, given the extent of potential infrastructure projects that this grant can fund (i.e. transport, water, energy, housing, land development), it is important that all investments are designed to respond to localised (current and projected) vulnerabilities and risks.</p> <p>Decisions around this should be informed through <i>authorised studies and strategies</i> (a key output of the ICDG) that consider possible adaptation and mitigation responses (incl. reduction in GHG emissions) in integration zones.</p> <p>These climate change-focussed studies should be included in the grant condition's list of eligible activities.</p> | <p>Output Amendments:</p> <ul style="list-style-type: none"> 'Number of low emission infrastructure projects including public transport, roads, water.... within identified integration and <i>climate risk zones</i>' 'Number of integrated strategic/catalytic low emission projects planned within identified integration and <i>climate risk zones</i>' <p>Condition Amendments:</p> <ul style="list-style-type: none"> 'Municipalities have the authority to select preferred investments... within integration and <i>climate risk zones</i>' [condition's sub bullets to also be amended to include <i>climate risk zones</i>] A municipality may apply to the transferring officer ... to utilise a maximum of 15 per cent of the annual allocation to undertake specific low emission activities within integration and <i>climate risk zones</i>...' [condition's sub bullets to also be amended to include <i>climate risk zones</i>] | <p>The definition of a '<i>climate risk zone</i>' must align with the proposed amendment to the BEPP guidelines, which includes an explicit focus on development in areas of the city considered most at risk/exposed to climate change impacts.</p> <p>It must be recognised that a focus on 'climate risk zones' may dilute investment in integration zones in instances where these zones do not align (e.g. investing in flood defence mechanisms, where the source of a flood is in a higher income area). In these instances, a motivation for this investment would be required to reflect the clear downstream benefits that would accrue within an integration zone as a result of the 'upstream' investment.</p> <p>In addition to the recommended addition of 'climate risk zones' as priority areas of investment, the ICDG's conditions, outcomes and outputs focussed on <i>spatial targeting</i> (in relation to both integration and climate risk zones) must comply with the minimum standards as set out in DEA's guidance on integrating environmental principles in spatial development frameworks (currently in draft).</p> | M | RI | <p>Identifying vulnerable 'hotspots' and risks through a scientifically robust process and using this as a basis to demonstrate how the project addresses/responds to these will significantly strengthen an application for climate finance.</p> |
| Contains (or directly supports) projects that are responsive to climate risks and vulnerabilities and help achieve the articulated adaptation outcomes | | | | | | |
| Contains (or directly supports) projects that target greenhouse gas emissions levels and help achieve the articulated mitigation outcomes | | | | | | |
| Reflects formal commitment and political buy-in at the municipal level for climate change response | <p>Under the grant conditions, a possible 15% of the annual allocation is available for specified planning activities in integration zones – with one such activity being:</p> | <p>Condition addition [to be included under 'specified activities']:</p> | <p>These studies, strategies and assessments should be used to: i) identify climate risk zones; ii) inform resilient, low carbon responses to</p> | S- M | RI | <p>Such studies would inform the scientifically robust described above and form the basis for justifying the</p> |

| | | | | | | |
|---|--|---|--|--|--|--|
| | <ul style="list-style-type: none">enhanced policies and procedures for environmental and social management in infrastructure delivery <p>This activity could reflect formal commitment to climate change responses at the municipal level, provided it is understood that a core component of <i>environmental and social management</i> includes climate change impacts and risks. However, it would be preferable for specific climate-focussed studies, strategies and assessment to be included as an additional activity eligible for funding – demonstrating clear commitment to addressing climate-related risks and vulnerabilities.</p> | <i>Climate-focussed studies, strategies and risk assessments [noting that in instances where climate-related studies already exist at a municipal level, efforts should focus on updating these studies to ensure they align with DEA and NDMC's policies and assessment protocols, and ensuring baseline data that underpins these studies is robust and consistent]</i> | the current and projected climate impacts in climate risk zones and integration zones; and iii) monitor GHG emission contributions of grant-funded developments. | | | <p>need for climate finance, to fund explicit climate components of a city's prioritised functional areas of investment.</p> <p>Demonstrating clear commitment to support climate-focussed studies at a national and metro level also instils confidence in climate funders.</p> |
| Estimates and/or earmarks additional investment and finance needed for climate change elements of the instrument, above business-as-usual allocations | <p>Under the grant conditions, a possible 15% of the annual allocation is available for specified planning activities in integration zones – with two such activities being:</p> <ul style="list-style-type: none">Investment pipeline developmentThe development of infrastructure financing strategies and instruments. <p>Given the significant sums of potential climate finance available for resilient infrastructure interventions, these activities could also speak to the investments needed to ensure the sustainability and resilience of interventions in integration zones – through both mainstreamed/inherent CR&R elements and additional, targeted responses.</p> | <i>As recognised in the draft GCF Access Report, key to unlocking climate finance is the ability to demonstrate a certain level of climate resilience and responsiveness within an institution's existing capacity, planning and policies. The phased recommendations in draft BEPP Guidance Note are therefore designed to support South African cities in improving their ability to demonstrate this. Therefore, until sufficient/successful roll-out and uptake of these recommendations, it would be premature to introduce climate finance-focussed conditions into grant frameworks.</i> | | | | |

3.3 MODALITIES FOR INTRODUCING RECOMMENDATIONS

3.3.1 ANALYSING THE PROPOSED RECOMMENDATIONS

The below schematic illustrates the relative time and resource implications of the indicative changes in Tables 3, 4 and 5. It also shows potential *linkages* between grant changes, which relate primarily to the need for i) datasets and standardised climate vulnerability, risk and low carbon monitoring tools to guide grant investments; and ii) experts to support the development of climate resilient project pipelines.

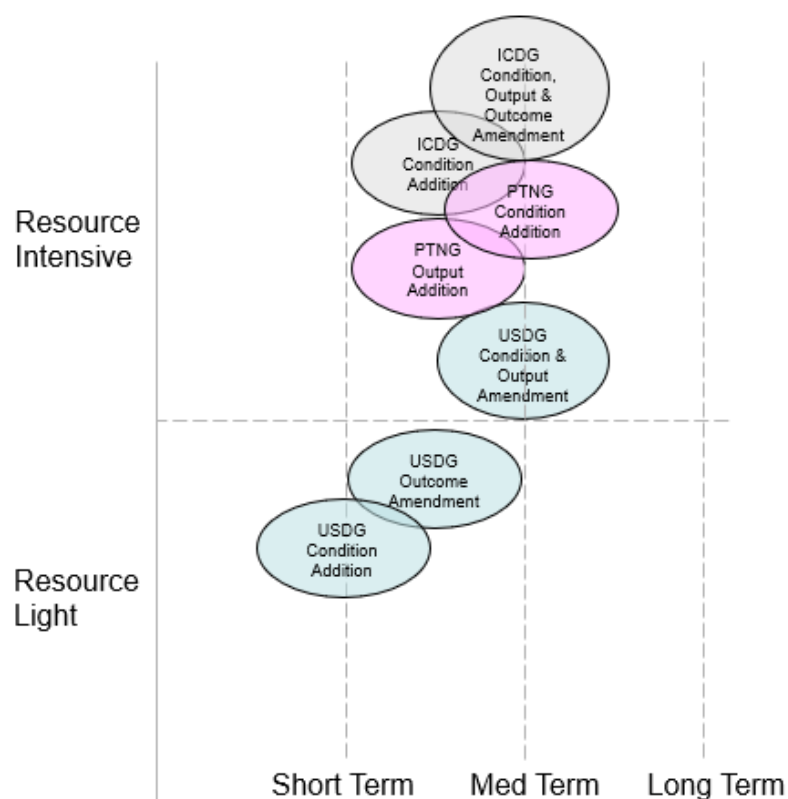


Figure 1: Representation of Time and Resource Implications of Proposed Changes

Given these linkages in indicative changes indicated in Figure 1, there is a need for improved cross-sectoral co-ordination to more effectively influence the way in which cities respond to climate change impacts – ultimately ensuring functional areas of investment are prioritised, and cities’ resilience issues are tackled holistically. This requires a shift in the siloed approach to developing, administering and monitoring sector-specific grants. This point links with another key issue noted in Section 2, regarding the need to align any proposed grant condition changes with National Treasury’s wider efforts to mainstream climate responsiveness and resilience into cities’ planning and budgetary instruments. Specifically, recognising the significant time and resources anticipated to roll-out the proposed grant condition changes, and noting alignment between these changes and the BEPP Supplementary Guidance Note, it is critical that these processes be conducted in parallel and in a phased manner. As noted earlier, this process must be flexible and carefully managed, based on how cities’ respond to the introduction of changes.

3.3.2 NEXT STEPS, SEQUENCING AND SUPPORT REQUIREMENTS

Looking to the future, planning and budgetary processes will ultimately be streamlined through Integrated Development Plans (IDPs), which are the central planning document for cities. This means climate resilience and responsive planning will ultimately fall within the IDP – acting as an effective, top-down approach to influence the content of the BEPP and the project pipelines funded through public grants. However, given the time and rigour required to reach this point, and recognising the current impacts that climate change is already having on the sustainability of cities' infrastructure and economies, it is important to focus immediate attention on what can be done to improve climate resilient elements of grant frameworks, BEPPs, the BFI and CIDMS.

Looking at the opportunity presented to revise grant frameworks as part of the reform process, there are immediate steps that could be pursued, led by the National Treasury, to strengthen climate resilience in grant conditions:

- Convene a series of meetings to further interrogate the practicalities (time frames, resource requirements, alignment with wider processes and budgeting cycles, shifts in roles and responsibilities of receiving and transfer officers, etc.) to take further the possible changes per grant.
 - At a National level, parties could include the departments of Environmental Affairs, Transport, Human Settlements, Water and Sanitation, COGTA and the National Disaster Management Centre (noting the combination of relevant parties required will differ according to the grant).
 - Once there is agreement on the appropriate phasing of select grant condition changes, cities must be engaged to ensure they understand the reasoning and need for such changes, the links between these changes and other planning, reporting and budgetary instruments, the timeframes of introducing them, and the proposed capacity support provision to operationalise them. Recognising the notably different capacity levels of cities, and the varying climate-related challenges they face, it is anticipated that the level of these engagements will be tailored per city. These engagement processes must be iterative, with feedback from the city-level discussions fed back to National departments, and amendments made to the planned phasing and capacity support as appropriate.
- Explore modalities for supporting/strengthening the development of climate responsive project pipelines for cities to ensure they are equipped with a repository of investment priorities that speak to the requirements of the updated grant frameworks (prior to introducing hard conditions).
- At the city level, consolidate and communicate national government's existing climate-related efforts, their links to sectoral planning, reporting and monitoring processes, and the expected roles that other sectors are required to play in terms of inputting/operationalising these (e.g. information on sector specific policies/plans with adaptation or mitigation elements, availability of baseline data, existing on climate-related localised/municipal studies).

Whilst not directly linked to the grant reform process, there are opportunities to influence both the BFI and CIDMS selection criteria and assessment processes – ensuring alignment both with the proposed grant condition changes and the recommendations detailed in the Built Environment Performance Plan (BEPP) Guidance Note.

ANNEX A – LOCALISED CLIMATE CHANGE CHALLENGES

A review of climate change related challenges in eight South African metros was conducted during the first phase of this project, with a view to highlighting the nature of impacts that cities must be better empowered to respond to. The findings from this analysis are summarised below:

| Buffalo City |
|--|
| <ul style="list-style-type: none"> It is clear from the projections in the review that Buffalo city will experience heavy rains, temperature increases, droughts and water shortages, and more frequent and severe flooding as a result of higher intensity storm events and possibly more frequent hail events. Therefore, the city needs to build resilience to these events, and improve the ability to respond. Added to this, the city also needs to respond to the growing risk of sea level rise and coastal erosion. Although the city does not have a stand-alone climate change strategy, it is evident that the city considers environmental sustainability as a key part of sustainable development. Therefore, there is a need to evaluate whether, and if so, to what degree the responses highlighted in the review have contributed to mainstreaming climate change into city planning and financial management, or whether climate change efforts have largely remained within the host department. While awareness of climate change and sensitization on the issue has undoubtedly strengthened due to the host of measures undertaken by the city, it is evident that there is room for more targeted responses and reporting as it is not yet clear that climate change has become a truly cross-cutting issue that is integrated across the board. Buffalo City is aware of climate change and the need to be responsive. This is evidenced by the inclusion of climate change risks, and targeted responses in the IDP, SDF and BEPP. However, as stated throughout these plans, one of the biggest challenges for the city is the split of roles and responsibilities between the city and the Amathole District Municipality. This means that although challenges are easily recognised, management and implementation is a challenge (this is indicated in the city's IDP, which prioritises environmental sustainability and climate change). The nature of this relationship and opportunities for alignment and coordination need to be assessed further. Therefore, there is a need to evaluate whether, and if so, to what degree the city has been able to mainstream climate change into the implementation and periodic review and updates of its plans. This is particularly important since the city does not explicitly report its efforts towards climate responsiveness (i.e. as compared to CoCT or eThekweni). |
| City of Cape Town |
| <ul style="list-style-type: none"> Cape Town currently faces a number of negative climate-related impacts such as droughts, water stress, excess stormwater and flooding, fires, coastal erosion and inundation, damage to homes and public infrastructure from heavy winds, health threats from heat stress and high concentrations of air pollution trapped under inversion layers, and species loss. These are projected to increase as a result of climate change, with projected impacts such as changing rainfall patterns and temperature extremes, rainfall variability (causing droughts and floods) and negatively affecting water resources and biodiversity. Therefore, the city needs to continue building resilience and improving the ability to respond to these events. The City of Cape Town has done a lot to fully understand the risks and vulnerabilities faced by the city, and also ensuring that these are managed effectively. Therefore, there is a need to evaluate whether, and if so, to what degree the responses highlighted in the review have contributed to mainstreaming of climate change into city planning and financial management, or whether climate change efforts in City of Cape Town have largely remained within the domain of the Environmental Resource Management Department. While awareness of climate change related issues has strengthened due to the initiatives implemented, it is not yet clear that climate change has become a truly cross-cutting issue that is integrated across the board in City of Cape Town. The City of Cape Town is aware of climate change, and the associated risks to the city's citizens and economy. This is evidenced by the targeted climate change responses initiatives in the IDP, SDF and BEPP. There is a need to investigate the level of climate mainstreaming further, and to evaluate to what degree the city has been able to mainstream climate change into the implementation and periodic review and updates of its plans. It will also be useful to understand what the challenges have been in mainstreaming climate change in its planning processes, as well as the changes in the institutional landscape that allowed the city to achieve the gains discussed in the review. |

City of Ekurhuleni

- Ekurhuleni is highly vulnerable to the impacts and effects of climate change in particular flash flooding and drought. Climate impacts such as increasing temperatures, increased rainfall variability, and increasing climate events such as hail, frost and lightening are projected to continue. These will continue to harm the city's infrastructure, the population and economy of Ekurhuleni. Therefore, the city needs to build resilience to these events.
- Although Ekurhuleni has a stand-alone climate change strategy, it is focused on energy and does not address the different aspects of climate change. Also, the lack of information related to climate related impacts for the municipality raises concerns as to whether these are actually fully understood. Therefore, it would be useful to evaluate whether, and if so, to what degree the responses highlighted in the review have contributed to mainstreaming of climate change into city planning and financial management, or whether climate change efforts have largely remained within the host department. Added to this, due to the existence of a unit that is responsible for climate change and sustainability issues, there is room for more targeted responses and reporting. It is not yet clear that climate change has become a truly cross-cutting issue that is integrated across the board, even though this could simply be an issue of absent report/marketing measures.
- Based on the review, environmental management and climate changes are intrinsically linked to city planning. While Ekurhuleni's climate response efforts are targeted towards mitigation, the need for adaptation is recognised through themes such as disaster risk management and reducing vulnerability to climate change. While the IDP and SDF recognise the need for mitigation and adaptation to be prioritised, the BEPP has only prioritised project with mitigation potential, although emission reduction opportunities are not highlighted. Therefore, there is a need to evaluate whether adaptation is considered a priority for the city. Added to this, it would be useful to investigate the efforts employed by the sustainability and climate change teams in strategically mainstreaming climate change into the city planning environment, as it is not yet clear that climate change has become a truly cross-cutting issue that is integrated across the board.

City of eThekweni

- eThekweni has an excellent baseline of information and plans. This information highlights that eThekweni needs to build resilience to more heavy rainfall events and be better prepared for flooding. It also needs to respond to the growing risk of sea level rise and coastal erosion. Thus, these are some key priorities that IDPs, SDFs, BEPPs, and other planning and budgeting instruments need to target.
- It is evident that awareness of climate change and the understanding of climate related risks has strengthened due to the projects and programmes that have been implemented. However, there is a need to evaluate whether, and, if so, to what degree the responses have contributed to mainstreaming of climate change into city planning and financial management, or whether climate change efforts in eThekweni have largely remained within the domain of the Department of Environment Planning and Climate Protection instead of being integrated city-wide, across sectors and institutions.
- The complete absence of climate change from eThekweni municipality's BEPP (2016-2017) is thought-provoking, especially in light of the municipality's strong prioritization of climate change in its other major planning instruments (the IDP, SDF, and several other local strategies and plans). On the one hand, this may be because climate change was not expressly noted as a theme for the BEPP, but the themes for the year – identification of marginalised areas; detailing of catalytic projects; identification of a prime investment corridor; and formulation of non-urban response – all lend themselves to considering climate change. This appears to be a missed opportunity. Given that the BEPP is a requirement for the draw-down of six Built Environment Grants, and that these grants make up a significant percentage of the Capital Budget, the BEPP could be a valuable opportunity to identify a pipeline of projects that strengthen response to climate change.

City of Johannesburg

- The City of Johannesburg needs to build resilience to more heavy rainfall events and be better prepared for flooding. It also needs to respond to the growing threat of high temperatures and heat waves (exacerbated by the urban heat island effect), as well as public health challenges fuelled by climate change.
- There is a need to evaluate whether the 2009 strategy and action plan had a tangible effect on city governance and administration, as well as in increasing the adaptive capacity of Johannesburg and reducing vulnerability. Given the advances in climate change science since the strategy was developed, the city recently embarked on the creation of a climate change strategic framework. This revised document may be a useful tool to ensure greater mainstreaming moving forward.
- Johannesburg has taken a number of important actions to respond to climate change. However, there are gaps in reflecting the prioritization of climate change across the three key strategic planning documents. Input from stakeholders in Johannesburg suggests that the city has been able to mainstream climate change into the implementation and periodic review and updates of its IDP and SDF, since both documents articulated the

need for further mainstreaming. Moving forward, the city intends to devote greater attention to climate change adaptation / resilience, which historically had received less emphasis in planning and budgets than mitigation.

Mangaung

- Mangaung is projected to experience changes in rainfall and temperature patterns and extreme temperature events, which will likely to result in heat-waves and high fire-danger, as well as increasing frequency in extreme events such as floods and droughts.
- Although Mangaung has made significant strides in understanding its climate impacts and has developed several strategies targeted as climate change and the management and/or of its impacts, there is room for improvement. This could be an issue of an absence of more targeted reporting, or alternately, the need for improved climate responsiveness through targeted projects. There is, therefore, a need to investigate the impact that the Environmental Implementation and Management Plan (EIMP) has had in mainstreaming climate change in the city (as it is currently not obvious). Added to this, there is a need to explore to what extent the city has been able to mainstream climate change into the implementation and periodic review and updates of its plans, as well as what challenges the city has had in mainstreaming climate change in its planning processes. This is particularly important since Mangaung has implemented measures to understand climate risk and vulnerability, but climate responsive projects have not been prioritised in the IDP, SDF and BEPP.
- Mangaung has done a lot to fully understand the risks and vulnerabilities faced by the city. However, there is a need to investigate the impact that the strategies mentioned in the review have had in the city (i.e. Climate Change Response Strategy, Green Economy Framework, and the Energy Efficiency Strategy). Added to this, there is a need to evaluate whether, and if so, to what degree the responses highlighted in the review have contributed to mainstreaming of climate change into city planning and financial management. While awareness of climate change has undoubtedly strengthened, it is not yet clear that climate change has become a truly cross-cutting issue that is integrated across the board.

Nelson Mandela Bay

- Nelson Mandela Bay needs to build resilience to a higher risk of drought and water stress, and be better prepared for water shortages in the dry season. It also needs to respond to the growing risk of sea level rise and coastal erosion. These are some priorities that IDPs, SDFs, BEPPs, and other planning and budgeting instruments need to target.
- There is inadequate evidence to demonstrate whether the responses highlighted in the review have contributed to mainstreaming of climate change into city planning and financial management, or whether climate change efforts in Nelson Mandela Bay have largely remained within the domain of the Department of Economic Development and Environmental Affairs. Therefore, it is not yet clear whether climate change has become a truly cross-cutting issue that is integrated across the board in Nelson Mandela Bay.
- While Nelson Mandela Bay has been active in taking climate change action and implementing projects and programmes aimed at climate change response, its articulation of these priorities in its three principal strategic planning documents has been inconsistent. It should be noted, however, that Nelson Mandela Bay is committed to increasing the mainstreaming of the response into city plans. It faces several challenges, including institutional capacity issues, that need to be addressed.

City of Tshwane

- It is projected that the Tshwane region will become generally drier due to climate change, decreased rainfall potentially results in reduced annual surface water run-off, reductions in mean flows of rivers and loss of biodiversity. Added to this, there is evidence of potential increases in the annual number of extreme rainfall events over the city, resulting in floods, as well as increased in hailstorms, fires, heat waves and droughts. The population of Tshwane is vulnerable to its climate. Climate change may thus also affect social and environmental determinants of health such as clean air, safe drinking water, and sufficient food and secure shelter.
- Tshwane has done a lot to fully understand the risks and vulnerabilities faced by the city, and also ensuring that these are managed effectively. Therefore, there is a need to evaluate whether, and if so, to what degree the responses highlighted in the review (such as the creation of the Sustainability Unit, the Green Economy Strategic Framework and the Green Buildings Incentive Schemes and Bylaws) have contributed to mainstreaming of climate change into city planning.
- Tshwane is aware of climate change and the need to be responsive. It does, however, seem that Tshwane's climate response efforts are largely targeted towards mitigation, although the need for adaptation is recognised in one project in the BEPP. Therefore, there is a need to evaluate whether adaptation is, in actual fact, considered a priority for the city. Added to this, it would be useful to further investigate the level of activity

in the municipality on climate responsiveness. This will help to determine whether the IDP, SDF, and BEPP accurately reflect the level of climate responsiveness in the city, or, whether, the city is in fact more actively engaged in climate change response (but are simply not translating/reporting the efforts on climate change into key planning documents). If the latter situation is true, it would be an opportunity to interrogate why the planning documents did not adequately mainstream climate change and why there is a mismatch between the city's actual prioritization / focus on climate change and what is reflected in these instruments.

ANNEX B – FRAMEWORK OF ANALYSIS

Table 6: Framework of Analysis

| Guiding Factors for Analysis of Local Government Instruments (Column 1) | | | | Elements of Built Env. Value Chain (Column 3) | | | | | | | | |
|---|--|--|--|---|-------------------|------------------|---|-------------------|--|--|---------------------------|--------------------------|
| | | | | Has Climate Responsive Been Mainstreamed into plans and budgets? (Column 2) | | Desired Outcomes | Institutional Coordination and Operational Resourcing | Spatial Targeting | Catalytic Programme & Resource (and Investment) Planning | Project Preparation and Implementation | Targeted Urban Management | Reporting and Evaluation |
| | | | | Yes or No | Why is it Yes/No? | | | | | | | |
| 1 | Takes into account climate change vulnerabilities and risks in the municipality during the lifespan of the planning instrument | | | | | | | | | | | |
| 2 | Identifies specific municipal assets and services likely to face the greatest impact from climate change | | | | | | | | | | | |
| 3 | Takes into account major sources of greenhouse gas emissions from within the municipality within the domain of the planning instrument | | | | | | | | | | | |
| 4 | Articulates relevant objectives or the desired outcomes of responding to climate change (adaptation and/or mitigation) | | | | | | | | | | | |
| 5 | Contains (or directly supports) projects that are responsive to climate risks and vulnerabilities and help achieve the articulated adaptation outcomes | | | | | | | | | | | |
| 6 | Contains (or directly supports) projects that target greenhouse gas emissions levels and help achieve the articulated mitigation outcomes | | | | | | | | | | | |
| 7 | Reflects formal commitment and political buy-in at the municipal level for climate change response | | | | | | | | | | | |
| 8 | Estimates and/or earmarks additional investment and finance needed for climate change elements of the instrument, above business-as-usual allocations | | | | | | | | | | | |
| 9 | Identifies implementation responsibilities, partners, and governance arrangements for climate change components | | | | | | | | | | | |
| 10 | Includes climate-specific M&E indicators (as part of its M&E framework), or includes climate-related indicators from local govt. M&E frameworks | | | | | | | | | | | |

ANNEX C – RECOMMENDATION ON EXPERT SUPPORT TO CITIES

The draft GCF Access Report proposed the following recommendation regarding the provision of expert support to improve cities' pipelines of climate resilient projects eligible for climate finance:

- **Recommendation 2:** In the longer term, CSP needs to form a peer review panel of city level climate change experts to review draft IDPs, SDFs and make recommendations on how emerging projects could be climate proofed and or placed in a climate finance pipeline. Furthermore, CSP should focus more of its existing support on strengthening cities IDP, SDF annual budgeting and planning processes.

ANNEX D - INTERVIEWEES

| Name | Designation | Contact | Date of interview |
|------------------------|---|-----------------------------------|-------------------|
| David Savage | Cities Support Programme, National Treasury | David.Savage@treasury.gov.za | 13 February 2018 |
| Reitumetse Molotsoane | Department of Environmental Affairs | RMolotsoane@environment.gov.za | 20 February 2018 |
| Stephen Kenyon | National Treasury | Steven.Kenyon@treasury.gov.za | 22 February 2018 |
| Yasmin Coovadia | Cities Support Programme, National Treasury | Yasmin.Coovadia@treasury.gov.za | 23 February 2018 |
| Michael Kihato | Cities Support Programme, National Treasury | Michael.Kihato@treasury.gov.za | 26 February 2018 |
| Samantha Naidu | Cities Support Programme, National Treasury | Samantha.Naidu@treasury.gov.za | 28 February 2018 |
| Anthea Stephens | Cities Support Programme, National Treasury | Anthea.Stephens@treasury.gov.za | 7 March 2018 |
| Zaheer Fakir | Department of Environmental Affairs | ZFakir@environment.gov.za | 7 March 2018 |
| Louis Boshoff | Consultant on National Treasury's City Infrastructure Development Management System | louis@iatconsulting.co.za | 8 March 2018 |
| Johannes Makokga | Department of Human Settlements | Johannes.Makokga@dhs.gov.za | 16 March 2018 |
| Revelation Modisenyane | Department of Human Settlements | Revelation.Modisenyane@dhs.gov.za | |
| Francois Sakata | Department of Human Settlements | Francois.Sakata@dhs.gov.za | |
| Ibrahim Seedat | Department of Transport | ibrahim.seedat@gmail.com | 11 April 2018 |