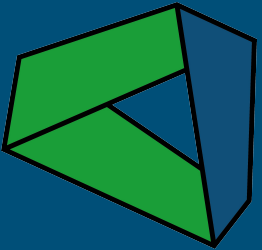
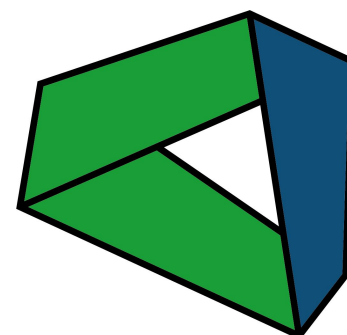


Creating a Business Case for Transformative Riverine Management



A guide for cities to
Durban's TRMP Business
Case development
process



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The “River” Map

This document, or “River” map, provides an account of the city of Durban’s approach to developing a business case for its Transformative Riverine Management Programme (TRMP). Durban’s business case development process, which was supported by the C40 Cities Finance Facility through technical assistance, can be adapted for specific local conditions and contexts and replicated across cities implementing similar transformative riverine management projects.

This document aims to guide cities by summarising the methodology adopted by eThekweni Municipality, and providing links to relevant TRMP documents and resources. The reference links are provided at the end of the document on slide 45 and 46. This document was compiled by the C40 Cities Finance Facility together with the City of Durban.

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Introduction

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Context

The province of KwaZulu-Natal (KZN) in South Africa, within which the city of Durban is located, is already experiencing climate change. This can be seen for example through changes in the seasonality of rainfall with increasing dry periods, more intense droughts and also more intense and unseasonal rainfall events leading to flooding and other impacts.

Climate Change Impacts in eThekweni

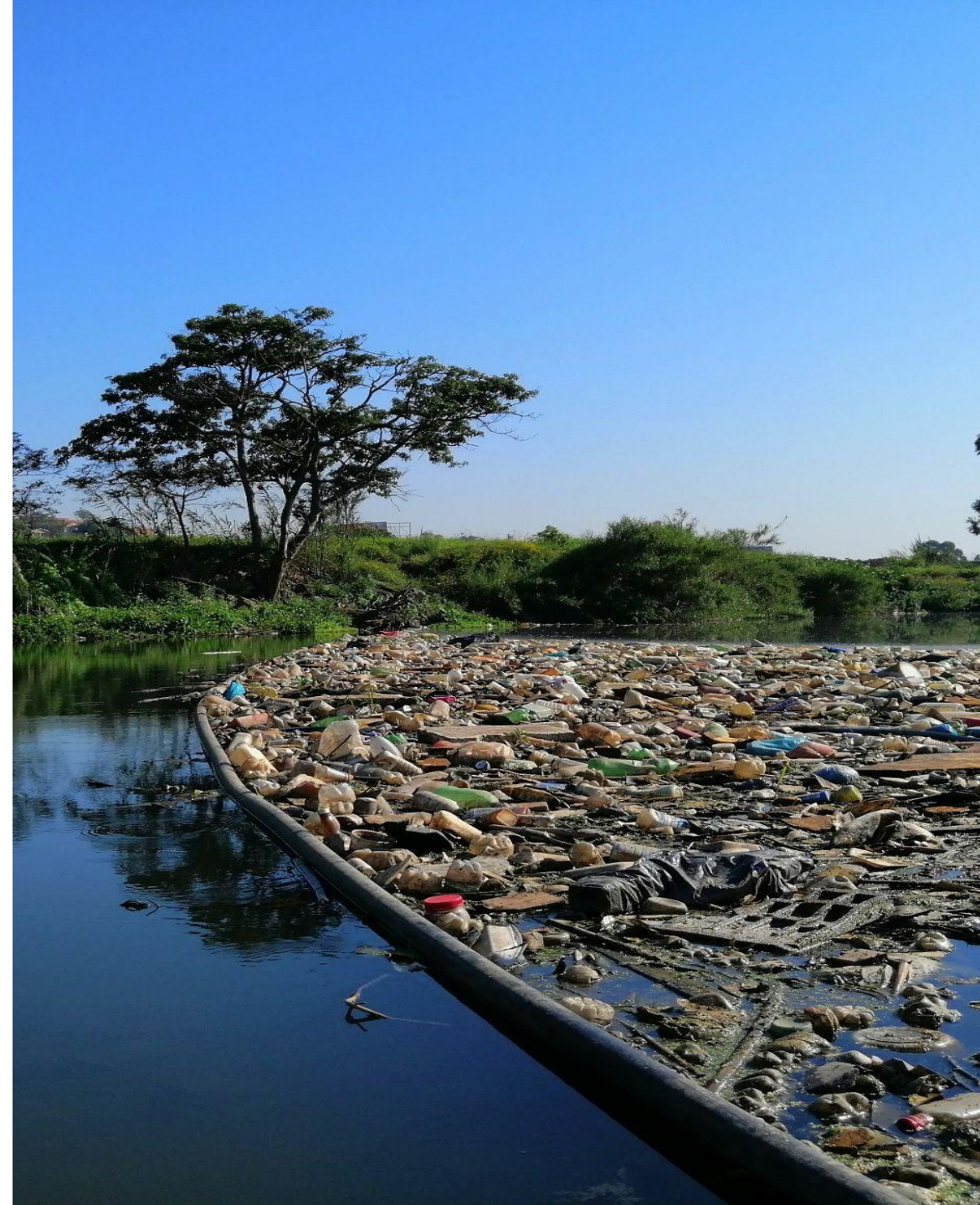
The eThekweni Municipality is the local government authority responsible for managing the eThekweni Municipal Area, which includes Durban. It has documented a number of extreme weather events that have led to substantial flooding, loss of life and damage to infrastructure over the past few years, most recently the devastating floods of April and May 2022. This resulted in large parts of Durban and some parts of KZN receiving almost 1/3 of its annual rainfall between 10 - 12 April 2022, this being over 300mm of rainfall. Unfortunately, over 450 lives were lost during the April 2022 event with loss of infrastructure quantified at over R 25 billion. Such floods also put water supply at risk, both in terms of quantity and quality, and increase the cost of purification of water to potable standards. Many parts of Durban experienced water supply interruptions due to the most recent flood events. This was due to time taken for substantial infrastructure repairs, but also in challenges with treating sufficient quantities of potable water, due to poor quality of receiving waters, to meet daily city needs.



Context

Climate change is also compounding the problem of **alien plant and other invasive species' infestations**, which is impacting upon local biodiversity and infrastructure. An estimated 60% of materials impacting rivers are from alien invasive plants with shallow root systems that are swept downriver during extreme rainfall events. During the April 2022 flooding event, it was clear that much damage to infrastructure was caused by such blockages. Improved riverine management that includes the management of invasive alien plants on riverbanks, and the removal of solid waste, is critical in reducing the flooding risks associated with blocked culverts.

Although Durban has a high average annual rainfall of ~ 1000mm, the El Niño event of 2015 highlighted how vulnerable the city is to the **effects of drought**. Although taps did not run dry, local agricultural production was heavily impacted with loss of stock and crops and water quality problems, which were significantly magnified by the low flow of rivers which were unable to dilute pollutants. Improved riverine management should therefore aim to improve infiltration and base flows in rivers to enhance water security.



The Transformative Riverine Management Programme (TRMP)

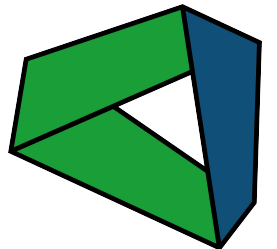
Durban's Transformative Riverine Management Programme (TRMP) aims to enhance the city's resilience to the impacts of climate change through the rehabilitation of 7400km of Durban's degraded rivers and streams to optimise ecosystem services*, as well as social and local economic benefits.

The transformative climate adaptation approach incorporates nature-based solutions, community ecosystem-based adaptation (CEBA), and green/circular economy considerations, with the intent to scale-up existing riverine management initiatives. The TRMP builds on the demonstrated impact of the Sihlanzimvelo Stream Cleaning Programme, through which cooperatives clear alien vegetation and solid waste from streams to reduce road culvert blockages and floods.

*Riverine areas provide critical ecosystem services, including: surface water supply, flood reduction, regulation of dry season flows, erosion and sedimentation reduction, food production, water quality maintenance, solid waste capture, biodiversity habitats and conservation, maintenance of transport access (Business Case for Durban's TRMP, 2021).

**Average exchange rate of 1 USD = ZAR 14.66 in January 2021. (InfoEuro, Jan 2021)

- **It is envisaged that up to 1.3 million people in Durban will benefit from improved ecosystem services associated with the rehabilitation of rivers through the TRMP.**
- **The estimated cost to implement a city-wide TRMP in Durban over a 20-year period is USD 512 million**, unlocking societal benefits of USD 887 million - USD 1.8 billion per annum, and improving ecosystem service levels by 10%.**



Durban's TRMP Business Case

Critical to the successful implementation of Durban's Transformative Riverine Management Programme (TRMP) has been the development of a viable business case that quantifies and articulates the costs and benefits of transformative riverine management across different sectors. This report makes the case for systems-thinking, cross-sectoral collaboration, and investment from the city and external stakeholders (e.g. private landowners, businesses, donors) to achieve the ambitious goals of the TRMP. The business case development was led by a cross-sectoral project team termed the Business Case Sub Committee (BCSC) in eThekweni Municipality.

Business Case for Durban's Transformative Riverine Management Programme

28 JANUARY 2021



Funding partners:



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Implementing agencies:

Paradigm Shifts

The development of the TRMP business case involves the following transformative paradigm shifts:

- The primary paradigm shift is the valuation of natural ecosystems as a key component of climate change adaptation, and the recognition that the maintenance of rivers brings benefits that exceed the costs, particularly as costs are escalated by climate change impacts. Cities will begin to understand the value that natural ecosystems provide to communities through ecosystem services.
- An analytical approach which combines hydrological modelling with climate circulation models, multi-factor vulnerability assessments, and cost benefit analysis.
- Using Nature Based Solutions and Ecological Infrastructure to solve challenges of flooding and urban surface water systems and the recognition of natural infrastructure as an asset that requires the same level of maintenance as built infrastructure.
- A partnership-based approach to riverine management and adaptation and the funding thereof. This involves cross-sector collaboration across municipal and government departments as well as with the private sector.
- Building the green and circular economy in the process of adaptation to create permanent jobs in Durban, grow hundreds of community enterprises and build recycling value chain development pathways.
- Knowledge and Learning Products developed from the TRMP (Business Case and Benefit Cost Analysis) provide African cities with the necessary foundation and starting point to compile a sound business case for nature-based solutions.

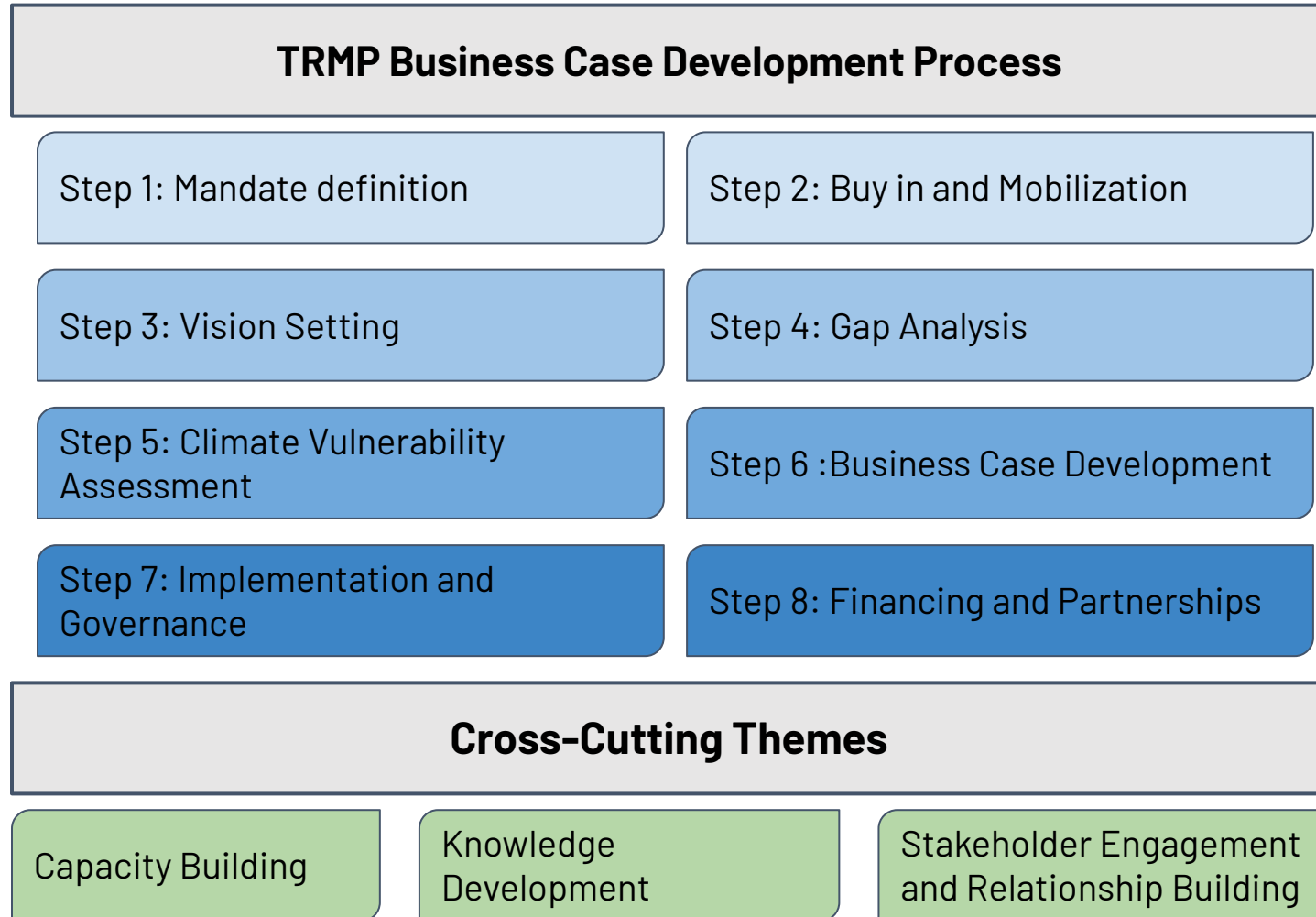
Areas of Work

The following areas of work emerged from Durban's TRMP Business Case:

1. Extending river management services to all public land abutting streams and rivers
2. Extending river management services to all private land abutting streams and rivers
3. Extending river management services to all traditional land ownership (Ingonyama Trust Board or ITB) land abutting streams and rivers
4. Improvement of river corridor performance through installation of ecological and amenity infrastructure
5. Developing the green and circular economies through the TRMP
6. Developing social cohesion and inclusion through the TRMP
7. Developing an effective programme management framework



Overview of TRMP Business Case Development Process



This figure provides an overview of the TRMP's business case development process.

The steps in this figure are not mutually exclusive, as they overlap with one another.



Business Case Development Steps



Definition of Mandate

What to expect

Consensus is needed amongst the city's technical and political leadership prior to commencing with the project, to confirm that there is sufficient political commitment, and buy-in from the relevant sector departments involved in the project, and alignment to the city's mandate and strategic priorities.

Why this step is important

Political leaders and relevant city departments must agree that riverine management is a priority within the mandate of the city. In addition, there should be awareness of the intent to address several cross-sectoral strategic policy priorities of the city through the project (e.g. health, economic development, environmental and ecological, climate change), and commitment from key sectors to participate in the process.

Definition of Mandate

How, What, Who

Relevant city departments are to reflect on the mandate of the city with respect to riverine management, and its interface with other sectors. A review of the relevant legislative framework is needed. Legislation prescribes the powers and functions of the different spheres of government with respect to different land-uses and land ownership types. The city can be a landowner or implementer, coordinator and regulator of riverine management within its jurisdiction. Additionally, a review of the city's strategies, existing and planned river and catchment management initiatives is also required to ensure that the project is needed and complementary.

The above can be facilitated through a high-level inter-departmental meeting or through other prescribed internal processes that might be relevant for different cities. The project is further defined during the 'Vision Setting' step.

Lessons Learned

The cross-cutting nature of transformative riverine management means that city line functions will need to work within a cooperative environment.

Buy-in and Mobilization

What to expect

Internal inter-departmental and external multi-stakeholder project steering committees (or other relevant governance arrangement) must be established to coordinate the development of a business case for transformative riverine management. Each committee is governed by a Terms of Reference, which stipulates roles and responsibilities, decision-making milestones and processes.

In the event that the city is a beneficiary of donor support for the development of the business case, an MoU or agreement outlining the terms of the cooperation should be put into place.

Why this step is important

The steering committees are responsible for day-to-day operations, project management, coordination, technical input, and decision making - all of which are critical to the development of a robust, city-specific business case. Furthermore, the successful implementation and sustainability of the project will depend on the commitment of the committees after the development of the business case, to ensure that the business case is supported into implementation. Steering structures are therefore critical for securing long-term support for the project.

Buy-in and Mobilization

How, What, Who

Prior to establishing steering committees, the department leading the development of the business case must review existing committees within the city and assess the potential to consolidate or utilise existing structures. If applicable, new committees should be established in accordance with the city's internal processes. Thereafter, Terms of Reference must be developed clearly outlining roles and responsibilities, critical decision-making milestones and processes.

In the case of Durban, this was known as the Inception Phase which entailed the following elements:

- Setting up of project governance structures
- Project design and work programme formulation
- Kick off workshop with external stakeholders
- Set-up of external stakeholder group
- Formulation of internal and external stakeholder engagement mechanisms and process
- Capacity Development Needs Assessment and Plan
- Preparatory Studies:
 - Study to evaluate the best approach to Cost Benefit Analysis for the Business Case and required supporting studies
 - Gap Analysis of riverine climate change vulnerability in eThekweni

Buy-in and Mobilization

How, What, Who

Various steering committees with different functions can be considered for the project, these include:

- **Operational steering committee:** which consists of the project team directly responsible for day-to-day operations and project management,
- **Technical steering committee** responsible for the governance and strategic oversight of the project to ensure alignment with the city's broader climate change and development objectives,
- **Political steering committee** inclusive of relevant departmental heads,
- **External stakeholder reference groups** representative of interested and affected parties i.e. riverine community, organised business etc.

However, city officials are typically inundated with operational and other project or programme related commitments. Therefore, if necessary the above-mentioned governance structures can be streamlined to a core working group that drives the business case development and implementation.

Buy-in and Mobilization

How, What, Who: Business Case Sub-Committee

In the case of Durban, the technical work to develop the business case was undertaken by a core group of officials who understood the value of this work. This core group led the process through a **Business Case Sub-Committee (BCSC)**. They reported progress to the Durban Climate Change Strategy (DCCS) Technical Task Team (TTT). Implementation of the City's DCCS is driven by the TTT, which comprises senior administrative leadership (Heads of City Units responsible for implementing the DCCS), including the Head: Engineering, who oversees the work of both the Coastal Stormwater and Catchment Management Department, and the Roads and Stormwater Maintenance Department. Political oversight of implementation of the Durban Climate Change Strategy (and therefore the TRMP) is by the eThekweni Municipality Climate Change Committee, chaired by Mayor Mxolisi Kaunda. The development of the TRMP business case was therefore linked to an existing structure that was strongly led at a political and administrative level. This allowed a 'reporting back' to a broader audience.

The project also works with an informal grouping of interested stakeholders known as **The Riverine Community**, that includes academia, civil society, and concerned local residents involved in riverine management. These stakeholders frequent environmentally-focused meetings in the city.

The BCSC includes officials from the following departments:

- Environmental Planning and Climate Protection Department
- Coastal and Stormwater Catchment Management Department
- Natural Resources Management Branch
- Roads & Stormwater Maintenance*
- Senior Project Advisor CFF City Cooperation Unit
- Economic Development Unit (which includes the Business Support Unit)**

*This function is responsible for implementing the existing Sihlanzimvelo Stream Cleaning Programme initiated in 2012. Cooperatives clear invasive alien vegetation and solid waste to reduce road culvert blockages and floods.

** This function is responsible for implementing the Green Corridors Programme initiated in 2010. Local communities maintain, improve and create new riverine open spaces (Business Case for Durban's TRMP, 2021).

Buy-in and Mobilization

Lessons Learned

Regional and local demonstrated impact is critical for mobilising local support for the project. The Durban TRMP is premised upon existing riverine management initiatives such as the Sihlancimvelo Stream Cleaning Programme, and the Green Corridors Programme. The aim of the TRMP is to upscale existing initiatives, the Sihlancimvelo Programme provided the basis from which a lot of the work was motivated.

It is imperative to ensure that the steering committees put in place are multi-sectoral and inclusive, representative of various internal and external stakeholders to ensure that different perspectives are considered. Upfront engagement is needed to help stakeholders understand the importance of the project and how it links to their own work.



Vision Setting

What to expect

The vision is an agreed-upon statement of the final project result. It defines the type of adaptation approach envisaged (ecosystem-based, transformative, community-based etc.), the project milestones and timeframes, the social, economic and geographic inclusivity approach, and other important factors. Due to the potential evolution of the project, the vision development process can be ongoing and may evolve as the perspectives of different stakeholders are integrated, and as knowledge about the work improves. The vision is documented within a project inception report, including the steering structures.

Why this step is important

Adopting a vision is a crucial step to building consensus in the city. The vision provides a framework for delivering the project's actions, objectives, and deliverables within a defined scope. It may also enable the reassessment of the municipal and external stakeholders involved.

Vision Setting

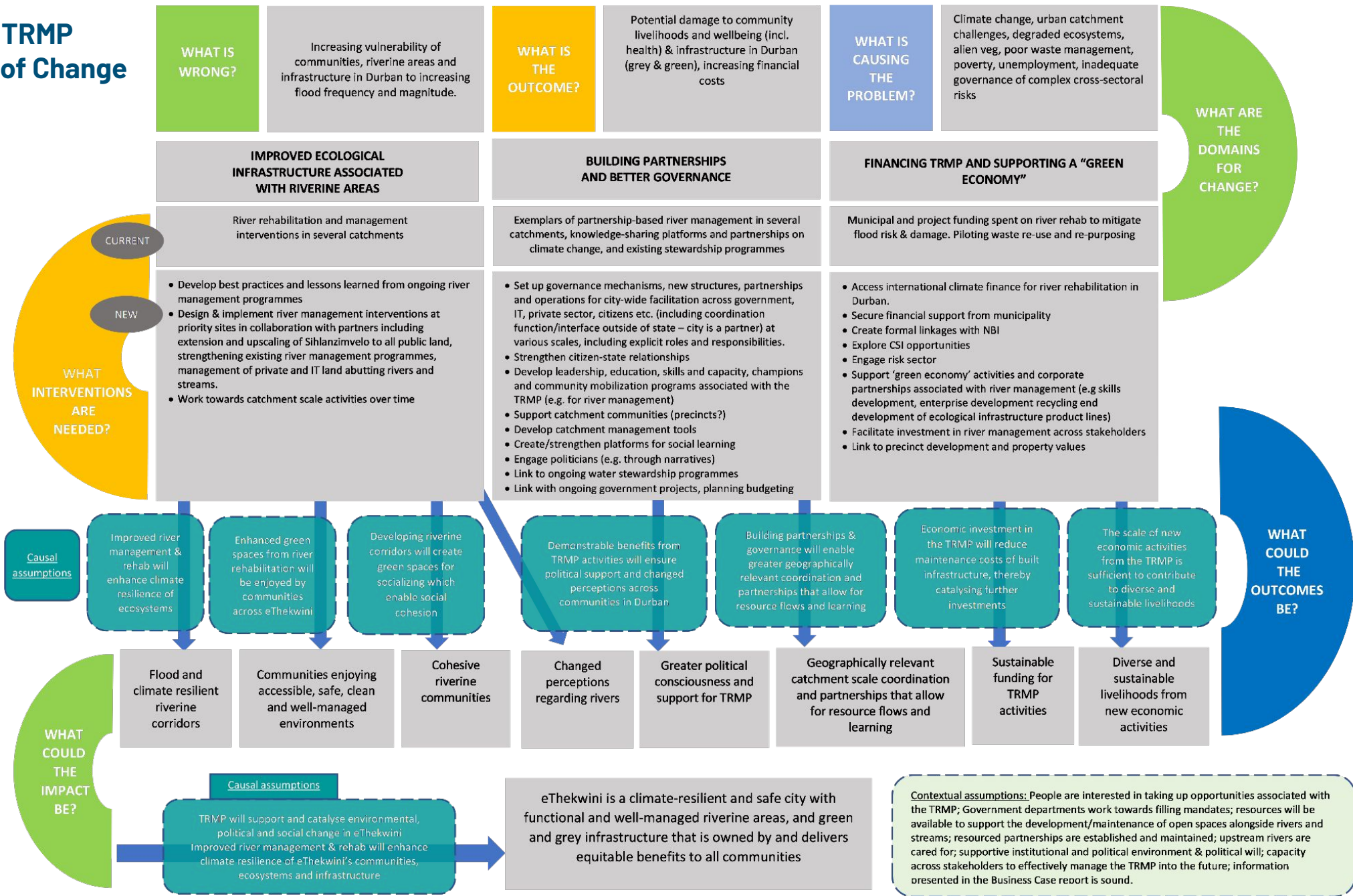
How, What, Who

The vision can be created during an inclusive theory of change workshop with the relevant stakeholders, subsequent to identifying and documenting preliminary anticipated climate change impacts to be addressed through the project. The project goal, intended inputs, activities, outputs, outcomes and impacts are assessed during the workshop (see next slide). The vision of relevant existing riverine management programmes within the city can be referenced as a guide. It can then be brought to the relevant technical or political committee for input and agreement. As the project progresses, the vision is adapted to reflect the views of other/new stakeholders with new lines of thinking. However, a consistent body of people, e.g. steering committees, should remain throughout the entire project process to retain the core vision.

Lessons Learned

It is important not to limit the vision at the start of the process. The project team needs to be as ambitious as possible to develop a transformative project. The vision needs to be maintained by a consistent body of people, those who can adjust it as the project progresses but maintain a consistent narrative, such as the steering committees. In addition, inputs from external stakeholders can bring a fresh perspective and raise helpful difficult questions in the refining process. Both formal and informal stakeholder consultations contribute to the vision setting process.

Durban TRMP Theory of Change



Gap Analysis

What to expect

The Gap Analysis assesses the river catchment data available within the defined project area. Including a review of existing and planned riverine management initiatives. Existing and outstanding catchment data is specified.

Why this step is important

It is essential to know how much data is available, as well as its relevance and quality, to ensure the city can proceed with a credible cost-benefit analysis in the later stages of the business case development. A Gap Analysis helps when developing an approach for climate vulnerability assessments and hydrological modelling, and should be based on a theoretical understanding of what is needed for both. Identifying any data gaps early on is crucial as this will impact the selection of specific catchments or sub-catchments, stakeholders consulted, and the project approach, cost, timeframes, and assumptions (e.g. proxy data).

Gap Analysis

How, What, Who

The Gap Analysis can be done by reviewing existing and planned studies and through stakeholder consultations, and workshops. The assessment also helps identify the specialists that are needed to conduct the study.

Lessons Learned

This process contributes to the growth of understanding of various inputs into the cost-benefit analysis and what will be possible given the data available.



Climate Change Vulnerability Assessment

What to expect

A Climate Change Vulnerability Assessment (CCVA) determines the impact of climate change on rivers. The CCVA identifies the local drivers of river vulnerability, which can include both the direct and indirect impacts of climate change, as well as non-climate related drivers (e.g. social, service delivery etc.). The current (baseline) and future vulnerability of rivers can be evaluated for different climate change scenarios or projections.

Why this step is important

The CCVA establishes the basic metrics upon which the Benefit Cost Analysis (BCA) is developed. It is the basis for identifying, prioritising and calculating the cost of river restoration measures. The CCVA shows what the climate impacts will be, who is vulnerable, the extent to which they will be affected, and who will benefit from improved riverine management in a specific catchment.

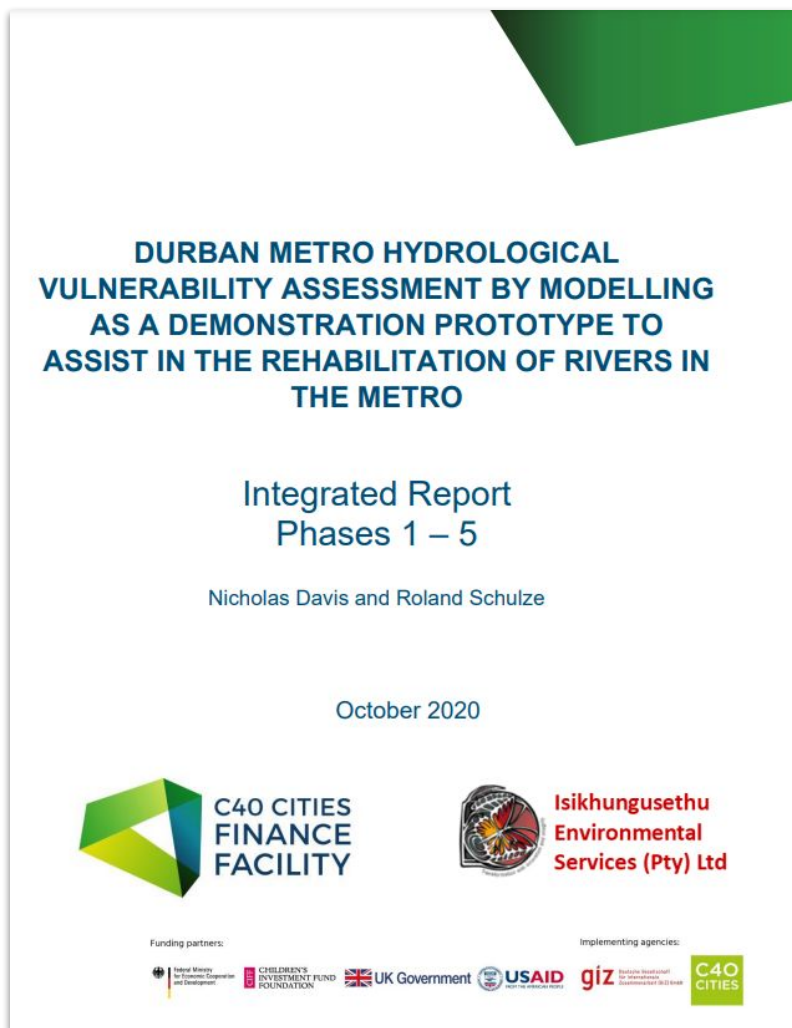
Climate Change Vulnerability Assessment

How, What, Who

The first step of the Climate Change Vulnerability Assessment (CCVA) is to consolidate relevant existing information that will inform the assessment for selected catchment(s), and to determine what the vulnerability drivers are for each specific context (e.g. solid waste, sedimentation, political, social etc.). The CCVA can be combined with hydrological modelling linked to climate circulation and precipitation models to evaluate the predicted changes to river performance under different climate change scenarios. The main stakeholders involved are the specialists (modellers, environmentalists etc), city officials, and the community. An indicative riverine management plan is developed suggesting possible interventions and their associated cost, to improve climate resilience and catchment management in response to the CCVA and hydrological modelling.

In the Durban case it was not possible to run CCVAs and hydrological modelling for the entire municipal area. Neither was it possible to develop riverine management plans and costing for every catchment. Therefore a proto-type catchment (proto-catchment) broadly representative of riverine conditions throughout the municipal area was used, where some of this work had already been undertaken.

Climate Change Vulnerability Assessment



Lessons Learned

The scope of the CCVA will be determined by data availability (refer to the Gap Analysis). Comprehensive data may not be available to conduct the CCVA, however alternative approaches can be considered to address data gaps, such as the use of proto-catchments and proxy data. Consideration should be given to how the data available within the municipality can be utilised effectively. It is also crucial to engage a range of stakeholders to better inform the CCVA results.

If needed, specific studies to inform the CCVA can be conducted pre- or during the CCVA.

Business Case Development

What to expect

The Business Case presents a rationale for investment in transformative riverine management city-wide, targeted at specific audience(s). It is grounded in an evidence-based approach, therefore informed by a process of specialist studies and stakeholder consultations. The Benefit Cost Analysis (BCA) builds on the findings of the climate vulnerability assessments and hydrological modelling and provides the cost-benefit figures articulated through the Business Case narrative. It quantifies and articulates the costs and benefits (ecological, social, financial and economic) of investment in the riverine management interventions identified, including both municipal and societal avoided damage costs. Business Cases can be prepared for different land ownership types e.g. public and private.

Why this step is important

The Business Case provides an opportunity to build a financial case for investment in transformative riverine management for specific audience(s). It demonstrates the project's importance, and creates motivation for additional support. It is particularly important when dealing with stakeholders that need cost-benefit figures to demonstrate the value-add of investment in rivers. It can be used to persuade a range of funders to make the investments required, including the municipality itself, businesses and property owners, and global climate funders.

Business Case Development

How, What, Who

The development of a city-wide Business Case depends on climate vulnerability assessments, hydrological modelling, riverine management plans, and BCA's conducted at the catchment level. This is done for the specific representative proto-type catchments selected by the city, where applicable. The catchment level outputs can be extrapolated to the city-level to facilitate upscaling.

An appropriate approach for undertaking the BCA and therefore quantifying the costs and benefits of transformative riverine management must be carefully selected. The benefits and limitations of each approach must be considered e.g. Cost-Benefit Analysis (CBA), Multi-Criteria Analysis (MCA), or Cost-Effectiveness Analysis (CEA).

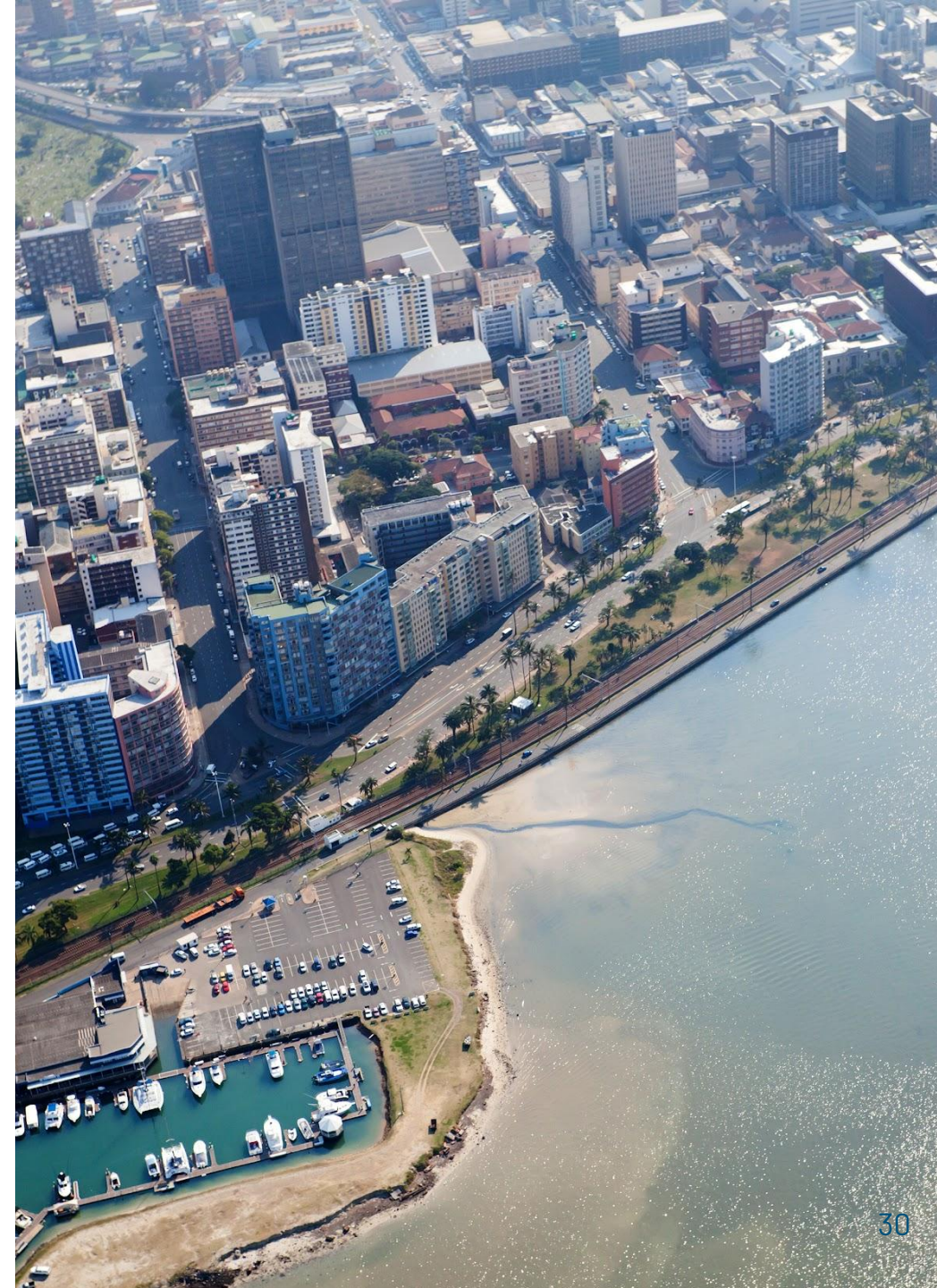
The preceding data Gap Analysis will inform the selection of the most suitable approach, and the assumptions needed. The benefits for which there is adequate quantitative data and supporting qualitative narrative available should be considered. Data and business cases available for existing related initiatives within the city must be considered. Furthermore, the stakeholders represented during consultations will highly influence the benefits captured; it is imperative that the appropriate representation is secured.

Durban's business case is also informed by a review of the water management regulatory framework and service delivery models, gender and green economy assessments, and an Ecological Infrastructure Toolkit developed through the programme.

Business Case Development

Lessons Learned

Quantifying and articulating the costs and benefits of transformative riverine management is not an exact science and the city may not necessarily have all the data needed. The benefits articulated through the Business Case per intervention identified will be limited by the data available for each. The city needs to start conservatively and then expand the cost-benefit estimates to incorporate a systems-thinking approach. It is imperative that assumptions are defined at the beginning of the process and that the approach adopted is documented with the utmost precision to ensure support of the outputs. The Business Case development process is not linear, the city must utilise information available (e.g. build on existing programmes), and advance areas of the programme where there is sufficient funding, knowledge and capacity. The use of experienced experts is very important and helps to supplement the city's skills base. In addition, an external expert can act as a neutral person to present the cost and benefits of investment in ecological infrastructure to the city's leadership. The involvement of stakeholders with in-situ knowledge through lived experience can be useful too.



Implementation and Governance

What to expect

A detailed implementation framework specifies how transformative riverine management will be mainstreamed, practically implemented and managed/maintained at the city, catchment and precinct level, over the medium to long term.

The scope of the framework should include proposals on the institutional vehicle required to source and manage funding, and oversee facilitation and implementation, the resources needed to expand existing programmes, intervention prioritisation and sequencing (phasing), business plans, governance models and implementation pathways.

Why this step is important

A detailed implementation framework unpacks the implementation plan at the city, catchment and precinct level, and provides a pathway to incrementally action the plan (over the different timescales) in order to operationalise/realise the business case. There are several layers and levels to implementation, these include the operational, management, strategic and cross-sectoral levels, all of which need to be addressed in the implementation framework.

Implementation and Governance

How, What, Who

Implementation framework development will begin with a baseline assessment to establish the status quo within the relevant city i.e. existing programmes, budget allocations etc.

In the case of Durban, high-level costs and actions were developed at catchment level. Implementation pathways detailing governance models, high-level programming and sequencing of implementation (including prioritisation of restoration measures), and financing options are under consideration at a strategic level, and will be further unpacked at catchment level at a later stage.

In relation to catchment and precinct management, Durban started with the high-level implementation plan, and then secured support to undertake more detailed work in specific catchments to develop an understanding of how implementation might unfold at these scales, and the kinds of partnerships that might be relevant in facilitating implementation.

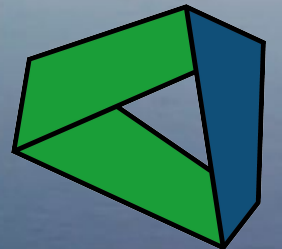
The implementation framework can be developed with the support of a consultant.

Implementation and Governance

Lessons Learned

The development of the implementation plan allows the city to drop into a greater level of practical detail and this creates an important opportunity for conversation and debate. It's also a critical opportunity to try and align ideas on how implementation should happen. It's only at this level of detail that some of these aspects become clearer, stimulating further conversation. The implementation plan development should be viewed as an inclusive, iterative process. The document should be easy to update when necessary (e.g. when changes in political leadership may occur etc.).

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Financing and Partnerships

What to expect

A detailed implementation framework will identify potential financing options and sources or mechanisms at the city, catchment and precinct levels. Each funding source will have unique requirements and processes (e.g. Development Financial Institution, insurance sector, climate finance, private sector/commercial banks). Partnerships (e.g. with different land owners etc.) are needed to fund implementation and maintenance at the different scales.

Why this step is important

Due to the complexity of adaptation finance, and the large scale of transformative riverine management projects, innovative financing mechanisms and blended finance approaches are needed. It is necessary to prepare financing applications (e.g. grants, loans etc.), include the project in the city's budgeting processes, and establish the necessary financing mechanisms and partnerships outlined in the detailed implementation framework.

Capital expenditure (Capex) funding may be used to fund initial river rehabilitation ensuring that the benefits of transformative riverine management are realised much sooner. Opex funding can be used to fund on-going riverine management.

Financing and Partnerships

How, What, Who

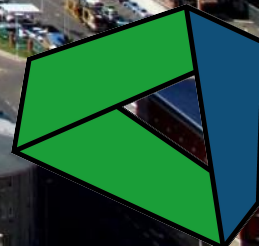
The processes and requirements of different financial institutions or internal and external funding sources must be clarified, thereafter the necessary documents/applications can be prepared where applicable. City officials would lead the preparation of the funding application documents.

In the case of Durban, financial options will be assessed, and a catchment management partnership framework prepared after the development of the high-level implementation plan.

Lessons Learned

The trade-offs of the different financial sources must be considered in the best interest of the city e.g. extensive lead times, high loan interest rates, new/untested innovative solutions etc. Furthermore, there needs to be an alignment between the objectives of the city and the funder, elements of the implementation plan must therefore be carefully aligned with funding opportunities.

Cross-Cutting Themes



Capacity Development

What to expect

A capacity development plan is compiled subsequent to undertaking a capacity development assessment. The plan specifies the capacity development measures required to implement the project and the associated delivery requirements such as cost, content to be covered, delivery format, and experts needed. The plan builds on the assessment which entails a skills audit and the identification of knowledge gaps of relevant city departments, officials and external stakeholders involved in the implementation of the project.

Why this step is important

The city should distinguish between the existing and required internal (organisational and individual) and external capacity to sustain the project, and to stimulate transformation and innovation. A capacity development plan will enable the city to overcome identified capacity gaps to successfully deliver the project. Capacity development measures can be broad, therefore not limited to training. Peer-to-peer exchanges on success examples are also needed.

Capacity Development

How, What, Who

A capacity development assessment can be conducted at the beginning of the project to inform the development of a capacity development plan. The plan should consider the complexity of climate change projects, transversal coordination for project delivery, the actual experiences of city officials, technical and 'soft' aspects, individual and organisational needs.

Capacity can be strengthened during the project or on an ongoing basis. Capacity development could be delivered through master classes, and peer-to-peer knowledge exchanges. The capacity development delivery mechanism must be appropriate for a transversal audience where applicable. The consultants supporting the development of the business case could provide support to the delivery of the identified capacity development measures.

Relevant specific capacity development areas include:

- Foundational and complex project specific climate change principles,
- Specialised project and programme management to facilitate coordination at scale,
- Programme development,
- Funding application development,
- Enterprise development,
- Recognition and development of project champions with extensive institutional knowledge.

Capacity Development

Lessons Learned

It could be beneficial to conduct capacity development assessments at different stages of the project. An earlier assessment helps with broader knowledge gaps e.g. related to climate change more generally. However, substantial additional details emerge during the implementation plan development stage around specific roles and responsibilities. A critical re-evaluation of capacity gaps may be needed at this stage. Resources should be allocated to the capacity development of both internal and external stakeholders for effective project implementation.

The project team and other relevant stakeholders should have some relevant inherent capacity at the beginning of the project, if not this could be developed e.g. Durban prepared a climate change course for municipal officials. Additionally, the project team will benefit from a thorough understanding of one another's expertise and knowledge gaps, as this will ease collaboration.



Knowledge Development

What to expect

The knowledge development of the city involves the dissemination of experiences to help cities in similar situations secure their own funding for climate projects. These activities will focus on the unique knowledge generated by the city through its project preparation and capacity development activities. Planned activities can be documented in a knowledge and learning strategy.

Why this step is important

This step is important for primary and secondary cities worldwide to mobilize financial resources for transformative actions, which will significantly reduce their greenhouse gas emissions and build climate resilience. It is also important for the city to collect learnings that can be applied in future projects, and to ensure knowledge is collected from key staff members.

Knowledge Development

How, What, Who

Knowledge building should be done near the end phase of the project, once capacity building and project preparation are underway. The city team should set out provisional timelines and actions for the knowledge and learning efforts that reflect any knowledge gaps they may have observed during project preparation. This can be captured in a knowledge and learning strategy. The dissemination tools can include workshops, reports, knowledge gap assessments etc. The knowledge dissemination should include members of the city team, as well as any external consultants or stakeholders involved in the project that may have relevant knowledge

Lessons Learned

Close collaboration with neighbouring cities is essential since climate impacts are not limited by political boundaries.

Stakeholder Engagement and Relationship Building

What to expect

A stakeholder map enables the city to identify and categorise (by mandate, importance, interest, influence etc.) all interested and affected stakeholders to be consulted throughout the project, across different sectors that will benefit from the project, both internally and externally. A stakeholder engagement plan can be developed outlining the approach and mechanisms for the delivery of stakeholder consultations for the different audiences. The outputs of stakeholder consultations include co-created reports, plans etc.

Why this step is important

Ongoing engagements with internal and external cross-sectoral stakeholders secures interest and involvement in the project, and brings additional knowledge to the forefront, enabling problem solving, and cross-sector collaboration and coordination. External stakeholders add value to the project through involvement in other relevant riverine initiatives, and their different thought processes and perspectives which challenge the city's thinking.

Early discussions with stakeholders across different sectors will inform critical discussions, and aspects to be considered throughout the project, as well as enhance systems-thinking.

Stakeholder Engagement and Relationship Building

How, What, and Who

Internal and external cross-sectoral stakeholders are to be consulted during the early stages of the project, and on an ongoing basis to retain interest and involvement. Effective stakeholder consultation can be facilitated through workshops, mind-mapping, communities of practice, focussed working groups etc. Engagement with a group of diverse representative stakeholders will bring different perspectives. The engagements should be as inclusive as possible, including as many people as possible. The stakeholder group will broaden over time as the project progresses.

A stakeholder map is to be developed to identify all interested and affected parties, and where possible a stakeholder engagement plan should be developed. It is imperative that the project team demonstrates that the recommendations and inputs of the stakeholders are captured and considered during the project through reports etc.

As the Durban TRMP moves forward with implementation in Durban, there will be a number of key stakeholders, and these will vary according to the land ownership category. On municipal owned land, the city is the primary stakeholder along with implementing organisations and catchment residents. Where land is privately owned, owners and the organisations that are contracted to implement become the primary stakeholders. Here the city becomes more of a facilitator, matching downstream beneficiary activities to the primary TRMP activities. In-land under traditional authority management, said management is the primary stakeholder.

Stakeholder Engagement and Relationship Building

Lessons Learned

The earlier and more inclusive the stakeholder engagement the more beneficial to the project, top-down approaches to climate change mainstreaming are not necessarily effective. Furthermore, cross-sectoral engagement internally and externally will add immense value to the project through the development of a joint understanding of the project benefits across multiple sectors, and improved cross-sectoral relationships and collaboration. Sectoral champions are needed to drive these cross-sectoral engagements. External partnerships are crucial to the sustainability of riverine management projects with respect to implementation and ongoing maintenance. Existing networks and relationships play a key role in sustaining these stakeholder processes, some of which can be quite informal.

Reference Documents - Steps

Introduction: [TRMP Business Case](#)

Step 2 and Step 3: [TRMP History Document](#); [TRMP Inception Report](#)

Step 4: [Climate Change Vulnerability Gap Analysis Report](#)

Step 5: [Durban Metro Hydrological Vulnerability Assessment](#); [River Vulnerability Assessment](#); [Riverine Management Models Report](#)

- **The CCVA and hydrological models must be tested prior to application in other contexts, noting the differences in river vulnerability drivers across cities. Sometimes the social and human impacts aren't accounted for because the report is done by natural scientists. Other municipalities will need careful consideration of the local elements.*

Step 6: [Benefit Cost Analysis Technical Report](#); [Benefit Cost Analysis - Spreadsheet*](#); [Durban TRMP business case report including Gender Analysis](#); [Proto-catchment selection criteria](#); [Green economy report](#)

- **The tools available (and the enclosed assumptions) must be adapted to the unique context of each city replicating the Durban TRMP process. Cities must apply and test their own assumptions.*

Step 7: [TRMP Implementation framework](#); [Implementation framework ToR*](#)

Step 8: [Regulatory Framework and Implications for Partnership-Based River Management](#)

**documents available upon request at contact@c40cff.org*

Reference Documents - Themes

Theme 1: [Capacity development assessment and plan](#)

Theme 2: [Knowledge and Learning Strategy](#)

Transformative Riverine Management in Durban Series:

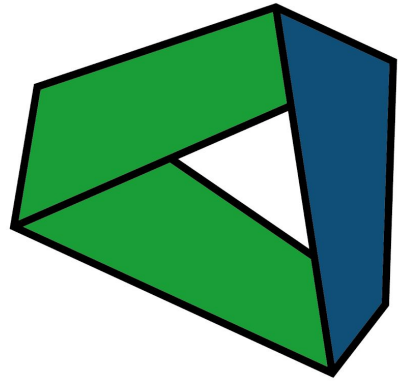
- a. [Part 1: Background and structuring](#)
- b. [Part 2: Implementation insights](#)
- c. [Part 3: Making the case for upscaling investment in transformative riverine management in Durban](#)
- d. [Part 4: Address wastewater impacts on rivers](#)

[Transformative adaptation of rivers in an urban context: An ecological infrastructure and socio-ecological toolkit](#)

[Presentations and Recordings- Learnings from Durban webinar series](#)

[Short Animated video of TRMP](#)

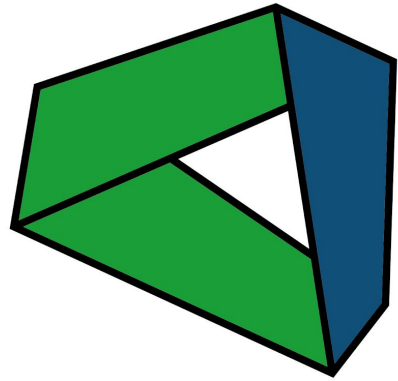
[Live video of TRMP with Mayor](#)



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Disclaimer

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About the C40 Cities Finance Facility (CFF)

The CFF is a collaboration of C40 Cities Climate Leadership Group and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The CFF supports cities in developing and emerging economies to develop finance-ready projects to reduce emissions in support of limiting global temperature rise to 1.5°C and strengthening resilience for the impacts of a warming climate.

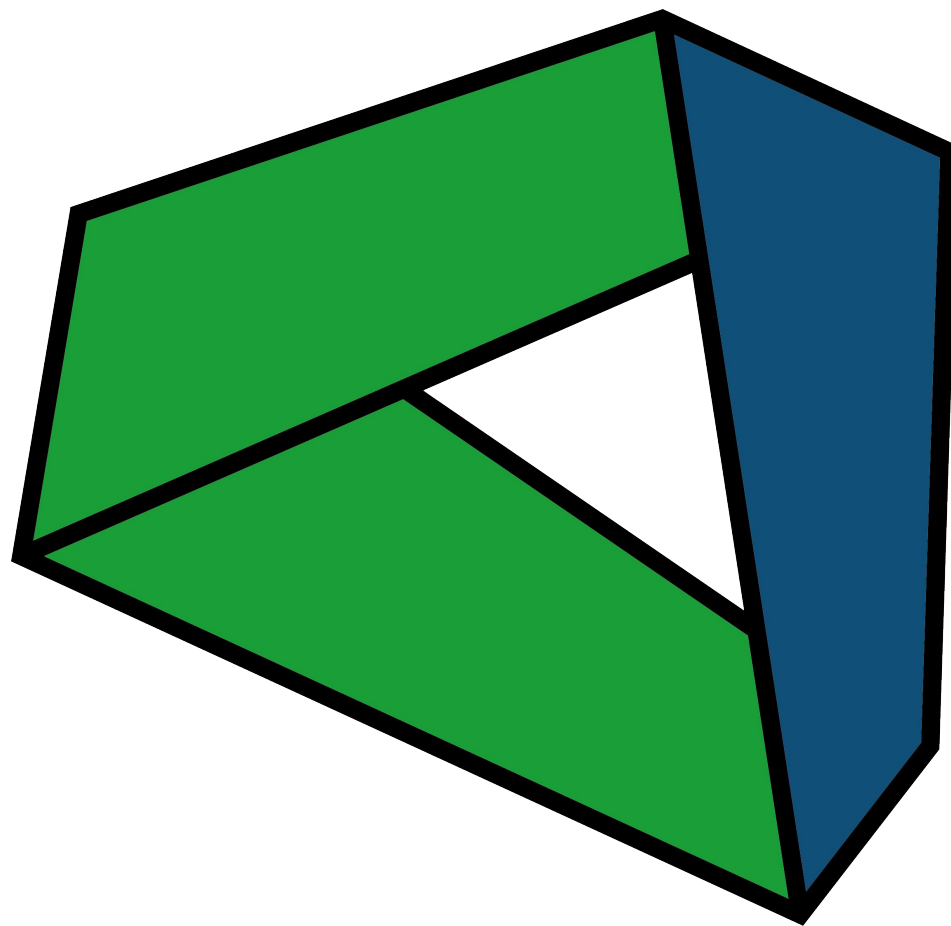
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Implementing agencies



Funding partners





Thank you

For additional questions, please reach out to contact@c40cff.org