Transforming southern African cities in a changing climate

# Lessons about fundamental changes and demonstrable aspects of transformative adaptation in Durban and Harare

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## Introduction

For something to be considered transformative adaptation it must display a disruption to and departure from the status quo of the current system or systems. Transformative adaptation places an emphasis on changing the underlying causes of climate risk and vulnerability rooted in the dominant development paradigm and associated power structures. Transformative adaptation does not simply address the symptoms of climate impacts but tackles structural as well as material inequalities by challenging and disrupting power asymmetries, thereby contributing to social justice. Fundamental aspects of the system that are expected to change during such transformations include: norms and values, governing rules, law or customs, and the flow and distribution of power and resources. There must be a marked and persistent change in thinking and doing.

When tasked with deliberating criteria for transformative adaptation (see text box), participants at the first LIRA Learning Lab in Durban suggested that in addition to triggering and sustaining deep, systemic changes, initiatives must also be demonstrable in practice. In their view, for transformative adaptation initiatives to work they must visibly be tackling and improving everyday problems that local people are facing. We therefore looked at this aspect in relation to the projects involved in the research.

We analysed transcripts of the interviews undertaken with representatives from the four Durban projects looking for indications of fundamental changes in thinking and doing. We also sought to unpack ways in which practical benefits are manifesting from potentially transformative projects.

Co-developed criteria of TA

1. **Fundamental/sustainable changes in thinking and doing**
   a. **Capacity is developed for those involved to support this fundamental change**
   b. **The fundamental changes must be permanent**
2. Inclusive
   a. Relationships across stakeholder groups support inclusivity
3. Challenges power asymmetries
4. **Must be demonstrable in practice**
5. Responsive and flexible
6. Holistic, complex systems thinking
   a. Thereby addresses climate in combination with other things
   b. Breaks down divisions between adaptation, mitigation, and sustainable development

## What fundamental changes are evident in the Durban projects?

In the Sihlanzimvelo project there are indications of a fundamental shift in the way in which problems are **framed** and rivers are **valued**. There is a move away from a narrow focus on removing river blockages causing flooding to a more joined up thinking that recognizes health, employment, safety and biodiversity benefits of employing and skilling local co-operatives in

business practices, safety practices and stream maintenance to remove solid waste, alien vegetation and in some places revegetating banks. In some places where streams have been cleaned up, people living close-by are starting to use the banks for vegetable growing and kids are playing alongside the stream. Places where before the stream areas were avoided because, when overgrown, they were hotspots for crime and infested with rats and snakes.

Another key shift or change happening in Sihlanzimvelo is the increasing levels of engagement and planning around questions of how to scale up the initiative, to expand the programme to more streams and rivers beyond only municipal-owned land, and how to 'close loops' to create more work and business opportunities, for example using the waste materials removed from streams to make new products like pavers. To enable scaling up, officials involved in Sihlanzimvelo have been pushing for the reclassification of ecological infrastructure as municipal assets, as is the case with built infrastructure, to enable capital expenditure against loans to rehabilitate rivers and streams. The cooperative model used in Sihlanzimvelo marks a fundamental change from the individual employment model that is more commonly used in public works programmes. However, the low wages paid to those doing the physical work in the streams perpetuate the high levels of inequality so endemic in South African society, which are at the root of some aspects of climate vulnerability (e.g. low wages making it impossible for families to afford formal housing outside of high flood risk areas).

There are some key similarities and differences between the kinds of changes that Sihlanzimvelo is pushing forward and those happening in the other three projects that we looked at: the Palmiet Catchment Rehabilitation Project (PCRP), Aller River Pilot Project (ARPP) and Wise Wayz Water Care (WWWC). A commonality is that all of them are reframing the issue from flood risk and environmental management to that of enhancing socio-ecological systems, using river management as a means of developing local economic opportunities through green jobs and promoting community and youth development through organizing, training and upskilling. Also, all the projects, to varying degrees, have an explicit focus on experimentation and learning-by-doing using small catchments that are more manageable to work in with multiple stakeholders but exhibit the diversity and complexity of issues occurring in larger catchments, to test and learn things to apply at a broader scale. Sihlanzimvelo is doing this through the work of municipal officials and consultants, with support from C40 Finance Facility, while PCRP includes research projects undertaken by academics and students yielding valuable data and in-depth analysis of various aspects of the catchment, especially from a governance perspective.

PCRP is focussing strongly on sustained multi-stakeholder engagement and deliberation to foster joint decision-making and collaborative governance arrangements, especially including those living and working informally in the Quarry Road settlement. PCRP has invested in the process of engagement between residents, municipal officials and academics to co-develop an action plan based on their different relationships with and goals for the catchment. Instead of starting with a municipal-led set of technical interventions the action plan has become a combination of undertakings by various actors. Lots of time has been invested in relationship-building and therefore less on physical interventions that change the material realities of poverty, river health and water quality. Belonging to the PCRP is completely voluntary. It started out as different groups coming together to improve various aspects of water security. Most of the initial interventions were funded by research funding, as well as the time of people volunteering at Palmiet RiverWatch. Municipal funding for particular interventions came later, with a service provider now having been appointed to implement some of the Action Plan items.

The ARPP is marked by its focus on training youth to be Eco-Champs, to do monitoring, to engage people of all ages within their communities to promote responsibility for the environment (especially through schools and organizing community clean ups) and to engage with local government officials regarding local service provision, especially solid waste management. This focus on youth as environmental ambassadors to work within their communities is a change from how many other

projects approach the problems of river management. Targeting the disposal of nappies and creating local solutions to how these can be kept out of streams through engaging creches, child carers and community ablution block attendants has been a particular innovation within ARPP; one that has gained national interest. Also, a lesson that has prompted change within ARPP is the importance of post-clearing restoration.

Unlike the others, a fundamental change that WWWC is championing is the effort to avoid dependency on the programme by refusing to pay stipends and instead focussing on training, skills development and skills formalization through qualifications to enable employment and/or business development, e.g. plumbing and invasive alien plants clearing (EnviroCare SME). This is understandably a source of tension, as some involved in the programme feel that some payment to meet short-term basic needs is necessary and appropriate. Many projects face this tension, which makes WWWC an interesting one to learn from.

## Enablers and barriers to creating and sustaining fundamental changes

Looking across the four projects, a set of key enablers to creating and sustaining fundamental changes are surfaced:

1. Having access to sufficient and sustained funding or investment to engage, plan, train, implement and sustain for long enough to see changes, as well as some flexibility in how funds can be spent (emphasized by all four projects).
2. Starting small, e.g. in smaller streams and tributaries which are more accessible, before tackling bigger and more complex catchments, and taking an explicit experimental and learning approach that accommodates failures (mentioned by all but most strongly a feature of PCRP).
3. Persistence, local visibility and regular, ongoing engagement to slowly get people to open up, engage, see things differently and act differently, e.g. not throwing refuse in the stream. Having local, community-based project representatives, like the ARPP eco-champs and co-op leaders in Sihlanzimvelo, lead by example helps in overcoming early reticence and scepticism from those in the project area.
4. Having good, effective, committed leaders and intermediaries to provide management, oversight and strategic functions, as well as building and sustaining communication channels and learning spaces is also clearly critical (e.g. i4Water in WWWC and the governance arena as a space of learning in PCRP).

Key barriers or constraints that have surfaced in the projects that limit or undermine the extent and persistence of changes include:

1. Gaps and fluctuations in funding causing delays, uncertainty and reduced work (mentioned in all 4 projects).
2. Legislation limiting municipality contracts to a maximum of 3 years that upsets the continuity and momentum of the project because of delays in awarding new contracts (Sihlanzimvelo).
3. Reticence of departments and organizations to pool budget allocations, or transfer budget to others, for activities that are then not under their control yet are linked to their performance management targets (Sihlanzimvelo).
4. The low levels or lack of pay for work done by those enrolled in the projects (mentioned in all four projects). This undermines motivation and sustained involvement because other income generating opportunities have to be sought.
5. Training and skills provision are often not leading to paid work or other economic opportunities (especially evident in WWWC, but also Sihlanzimvelo co-ops not getting other contracts).

6. Long time to see impacts and changes while trying to sustain participation and funding (all four projects), which fuels contestation over direction, priorities and allocation of funds (especially evident in PCRP).

### The need to demonstrate tangible benefits

The constraint listed above about the time it takes for change to happen relates strongly to the criterion of being demonstrable in practice, which participants brought up at the first Learning Lab. The suggestion is that unless people can see clear short-term benefits of the initiative, it is difficult to sustain it for long enough to make the fundamental changes required to tackle underlying systemic drivers of climate risk and vulnerability.

Sihlanzimvelo, with its operational focus and long track-record, now has 59 co-ops working in 295km of streams, so people are seeing work opportunities created and people active in the streams doing clean-ups (with assessors documenting and collecting data). Interviewees reported on the benefits from Sihlanzimvelo interventions having been noticed by a variety of people, ranging from communities living near target streams to those making decisions in municipalities, including: a reduction in the extent and incidence of flooding; a reduction in rats and snakes around settlements; the opening up of spaces for planting vegetables; safety benefits of having people present and working in the streams; seeing neighbours and children being able to play (more open spaces being used); the use of running water in the streams (water that used to be stagnant and polluted); and quicker response times to fixing sewer leaks and reduced cost to the municipality of fixing infrastructure due to flood damage. The demonstrable benefits of Sihlanzimvelo act as a 'proof of concept', and thus becomes one of the cornerstones of the vision for upscaling into the Transformative Riverine Management Programme (see the Brief on 'Moments of change').

In the case of ARPP, the nappies initiative led to reduced littering, which enabled Eco-Champs to start planting indigenous trees and shrubs as part of the biodiversity restoration component of the project, and also seems to be linked to a drop in reported sewer blockages per month. The WWWC interviewees reported communities experiencing a reduction in mosquitos as one benefit of cleaning up the wetland. PCRP interviewees spoke about the difficulties of showing tangible results when investing heavily in building relationships, undertaking research, and finding shared priorities amongst many different stakeholders, which also yield very important benefits but ones that cannot so easily be seen.

## What is emerging from Harare on this theme?

The Urban Resilience Project was initiated in Harare much more recently than the Durban projects investigated in this study and so there is little evidence yet of practical benefits and making significant changes. In terms of the Harare Wetlands Advocacy Project, there is little evidence of improvement in the condition of the wetlands but benefits are noted in other areas such as community empowerment and finding a voice, as well as a stronger motivation of the City of Harare to consider wetlands in planning decisions. What is clear from the Harare work though, is the difficulty in making change happen and stick when institutions of the state are very weak. The two projects in Harare suggest that there are local communities and international actors pushing for change, to protect wetlands from destruction and to reduce health risks associated with poor water and sanitation services (e.g. cholera and typhoid outbreaks), but the lack of consistent procedures and enforcement by government agencies (e.g. of EIA regulations and outcomes) results in a lack of sustained progress. The Harare cases also seem to confirm that reframing issues from environmental concerns to local development and employment opportunities is essential to get widespread support, especially from political decision makers.

## What does this mean for cities going forward?

Assessing change requires one to reflect on what the reference point or baseline is from which change is viewed. Looking across the cases it seems that the status quo or baseline from which fundamental changes can be judged is characterised by working in silos on a narrowly defined problem or service mandate, with a preference for hard infrastructure interventions, reliant on short-term project resourcing and with a weak understanding of the connections between climate hazards, environmental complexities, and socio-economic impacts. The projects all show signs of making changes towards organizing and coordinating around different and diverse problems, people, resources, and interventions to work at scale in a more integrated, systemic and sustainable manner. These changes are not complete or fully secured yet but are underway.

The question we must come back to is how these changes contribute to reducing the underlying causes or drivers of climate risk and vulnerability, especially material inequalities and power asymmetries that are at the heart of transformative adaptation. The challenge is to be able to explain and show evidence for the connections between actions in the projects and the drivers of climate risk and vulnerability. It is something that all the projects are working on, but it is not easy. Short-term, piecemeal, and highly prescriptive funding arrangements constrain the transformative potential of projects. Projects on their own are unlikely to be able to drive changes at the scale required to achieve transformative adaptation. But by the same token, transformative adaptation is unlikely to be possible without the cumulative effects of projects pushing new ways of thinking and doing. Linking up, learning across, and building synergies between multiple projects that cater to different contextual and organizational realities and needs is necessary to create momentum for systemic change. Municipal governments face significant constraints on the extent to which they can innovate (e.g. contracting rules and asset classifications), but without the city government being involved and effective, systemic change cannot take root.