



EMBEDDED RESEARCHER APPROACH

FRACTAL sought to deepen the engagement between scientific and city-regional decision makers. The project adopted an embedded researcher (ER) approach. ERs were recruited to liaise between scientists and decision-makers, dividing their time between universities and city government. Before the project, other engagements had tended to have a narrow focus and short-term consulting capacity.

In order to make climate science relevant and useable an understanding of the application context is required. Conversely, to ensure the robustness of climate information an understanding of climate science is needed. Making these connections is difficult because scientists and decision makers operate in different networks with different priorities, coding schemes and temporalities for their work. ERs were able to span these boundaries, facilitating engagements and helping to generate and translate the evidence needed for real-world decision-making processes.

THE CHANGE STORY

Southern African cities face climate vulnerability as biophysical factors interact with a complex set of social, economic and political factors. Climate resilience needs to be built into the development agendas of these cities. To do so requires accessible, defensible and actionable climate information at the city-regional scale. Generating such information requires bringing together scientists and decision makers. As one of the modalities for doing so, FRACTAL facilitated the placement of seven early career researchers in the role of ERs within six of their partner municipalities: Lusaka (Zambia), Windhoek (Namibia), Maputo (Mozambique), Durban and Cape Town (South Africa), and Harare (Zimbabwe). Each ER was employed by a local university and deployed to work part-time within the local municipality. They were supervised by two FRACTAL Principal Investigators (one at the local university and one at the local municipality). Some ERs were recruited from within the academic community (ranging from masters to post-doctoral level), while others were seconded from within the city government to work in a research and research coordination role. They played a key part in:

- Co-exploring existing knowledge and co-producing new knowledge on urban climate sensitivities and processes of building climate resilience in southern African cities between scientists and decision makers;
- Advancing the integration of contextual climate information by creating and sustaining learning forums and mechanisms, with the long term goal of shifting the way urban development, resource management and infrastructure investment decisions are made in these cities;
- Strengthening urban governance networks across sectors, within and between southern African cities, and building a culture of learning within these networks;
- Sharing lessons about adapting to a variable and changing climate across southern African cities within and beyond the FRACTAL network.



WORKING PAPER | [Embedded Researcher Approach \(Pretorius et al, 2019\)](#)

RELATED IMPACT STORIES (IS) | The importance of relationships & networks (through transdisciplinary co-production) (IS6); Integrating climate information into biodiversity planning: the role of the ER in Durban (IS9); Building relations and receptivity in Harare (IS10).

The Future Resilience for African Cities and Lands (FRACTAL) project aims to address the challenge of providing accessible, timely, applicable and defensible climate information that is needed by decision-makers operating at the city-region scale in southern Africa. FRACTAL impact stories have been collaboratively developed by various research teams. They highlight key methods, engagements and research findings from the FRACTAL project.



UNPACKING THIS STORY

ERs played a pivotal role in ensuring that over time FRACTAL’s agenda became more locally demand driven and less external donor driven and research led. Their efforts to map relevant stakeholders and knowledge holders, building and maintaining relationships with them, ensured that key city-regional decision makers were present at climate related dialogues, training events and learning labs.

Through their input, engagements were better designed to meet the priorities and constraints of decision makers. By helping to identify and create opportunities, more locally relevant research,

training and learning activities were organised and implemented at a city-scale. Their work also ensured that research partners were made aware of and increased their empathy for the practical challenges facing decision-makers.

The result of these engagements was an increased capacity of decision makers to use climate products effectively and of climate scientists to produce actionable information relevant to a given city context.

In parallel, both the knowledge and leadership capacity of the ERs improved. Their involvement

in FRACTAL provided them with experiential learning and formal training opportunities that increased both their technical knowledge - of climate science, urban governance and decision-making - and their socio-emotional skills of networking, communicating, negotiating and mediating.

Finally, the ERs were key enablers of and contributors to cross-city learning. They organised exchange visits and undertook comparative work that provided useful regional insights and built supportive relationships between the cities.

LEARNINGS

The ERs operated within an important trilateral partnership: the local university; city government; and the FRACTAL project lead partner. A commitment from the two city based Principal Investigators helped ensure that the ERs’ work was conceptually and contextually relevant, while the support from the coordinating partner provided structure and guidance related to the broader FRACTAL project. Other learnings included:

- Being part of a network of ERs across the region, as well as various various project task teams and thematic coordination clusters with local and international partners, enhanced the effectiveness of individual ERs. These networks will likely lead to future collaborations.
- ERs were drawn from various professional and disciplinary backgrounds and flexibility was key to aligning city contexts with individual expertise.
- All ERs were recruited from within the cities and they worked closely with senior academics in the university and officials in city government. Their knowledge, skills and networks are likely to be put to use in ongoing policy and research work being undertaken in the cities.
- Having a dedicated person who facilitates opportunities to connect people, projects and knowledge across cities, sectors and scales is beneficial but also requires ERs to be able to balance diverse demands.



ERs at a FRACTAL writeshop, from left to right: Kornelia Ipinge, Brenda Mwalukanga, Anna Taylor, Rudo Mamombe, Lulu van Rooyen, Hecrárito Mucavele



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