

# Climate change adaptation and poverty reduction co-benefits: Human capabilities towards green micro-enterprise

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*“Implementing PGDS through use of Evidence”*



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# Overview of the research

- Climate change presents a real existential threat to humanity (UN Habitat, 2011; Fay *et al.*, 2015)
- Around the world, local municipalities are working towards the implementation of climate change related programmes to reduce the impact of climate change disasters (Bakera, 2012; Carmin, Anguelovski, & Roberts, 2012)
- eThekweni is a leading municipality in the design and implementation of climate change related projects
- Its approach is underpinned by Community Ecosystem-Based Adaptation (Laros *et al.*, 2013)
- More importantly the municipality takes a pragmatic approach to climate change (Roberts *et al.*, 2016)

# Methodology

- Underpinned by a qualitative approach, this work builds on the document analysis of 104 climate change-related projects in the Municipality
- It assesses the poverty reduction co-benefits or the lack thereof within climate change related projects in eThekweni Municipality
- ❑ Document analysis of climate change related projects in eThekweni Municipality
- ❑ Interview with project participants
  - Individual interviews
  - Focus Group Discussions (FDGs)
- ❑ Key informant interviews
- Participants were selected purposively
- All interviews were audio-recorded, transcribed and analysed thematically using Nvivo

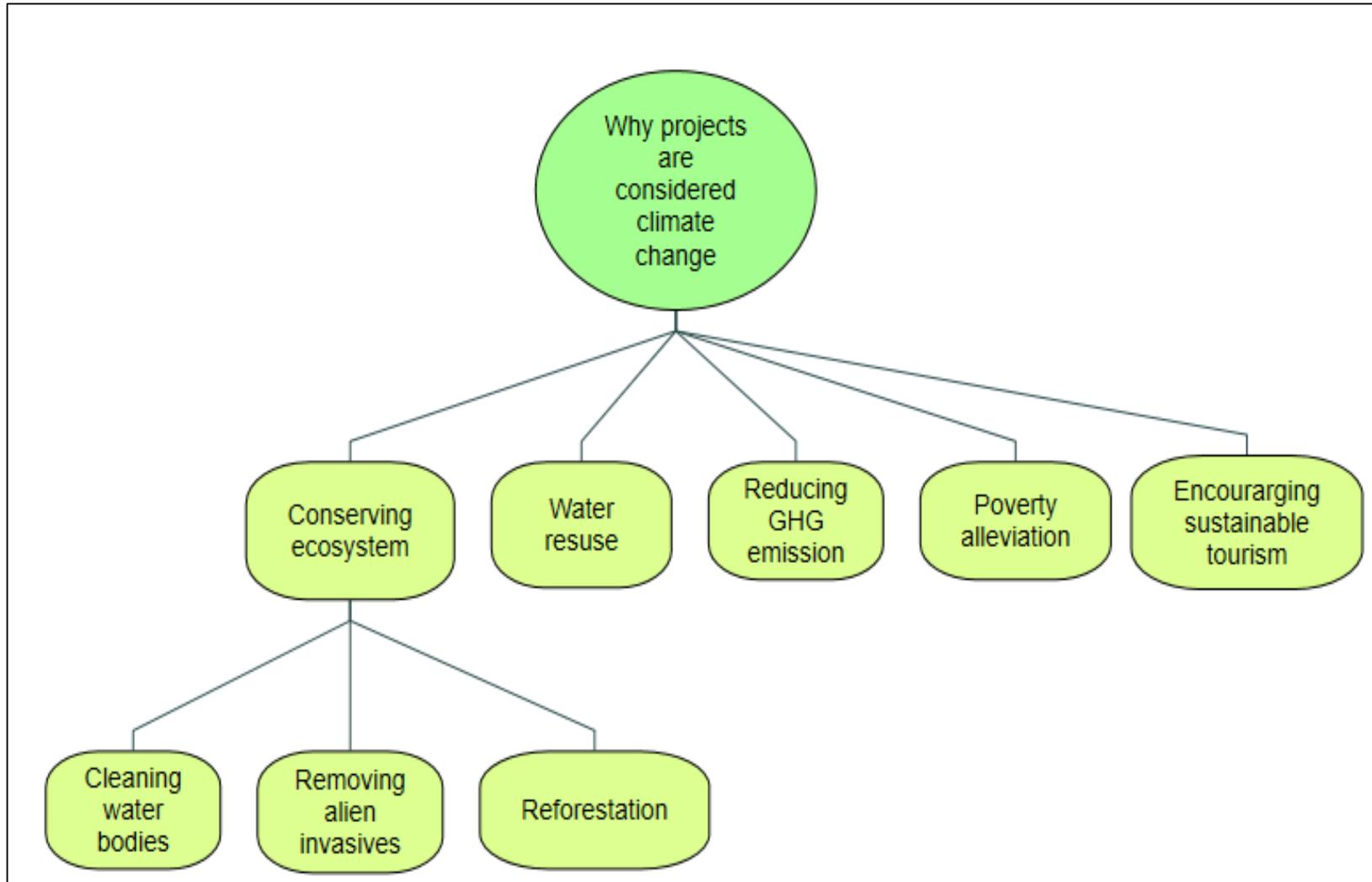
# Key research findings

	Project	No. of Interviews with Municipal Officials/project implementers	No. of individual Interviews	No. of FGDs	<b>CARBONN REGISTRY CLASSIFICATION</b>
1	Paradise Valley Reforestation	1	9	0	Mitigation action with secondary focus on adaptation
2	Grey Water Reuse in Community Gardens	1*	0	0	Adaptation action
3	Working on fire	1	0	2	Adaptation action
4	Durban Green Corridor	2	2	5	Adaptation action
5	Newlands Mashu Dewats - Evaluation for Waste Water Treatment and Reuse for Urban Horticulture	2	1	0	Adaptation action
6	KwaDabeka Hostel Hot water Project, Wonderbag, residential energy efficiency project	1	0	0	Mitigation action
7	Invasive Alien Plant (IAP) Control Programme	1	0	0	Adaptation action
8	Mhlangane Catchment Rehabilitation	1	0	1	Adaptation action
9	Green Street Retrofit (Residential Energy Efficiency Programme)	1	2	0	Mitigation action
10	Sihlanzimvelo Stream Cleaning	1	0	9	Adaptation action
11	Inkululeko Garden	0	0	1	Adaptation action
12	Ubumbulu Hub	1	0	1	Adaptation action
13	Sibukeni Project: Hammersdale	0	0	1	Adaptation action
14	Scorpio Place	1	0	1	Adaptation action
15	Sphikeleni	0	0	1	Adaptation action
	<b>Total</b>	<b>14</b>	<b>14</b>	<b>22</b>	<b>50</b>





# Key research findings cont.



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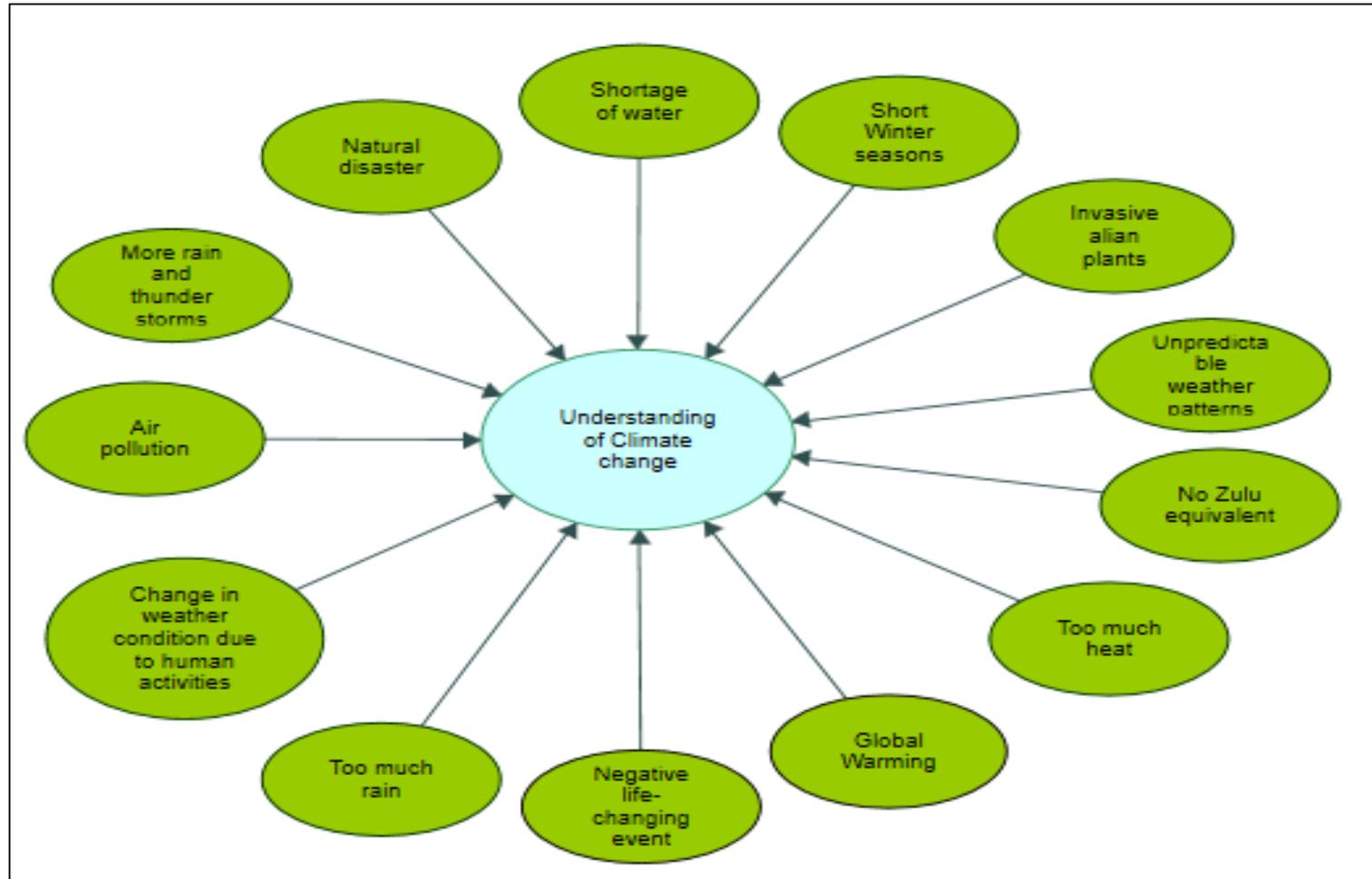
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# Key research findings



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# Key research findings

	Durban Green	Paradise Valley	Green Street Retrofit	Working on Fire	Umlhlangane catchment	Newlands Mashu	Sibukeni	Mbumbulu	Inkululeko	Sphikeleni	Sihlanzimvelo
Income/ financial wealth for the poor communities											
Improvements and access to jobs/ entrepreneurship opportunities											
Improvement and access to utilities or public services											
Improvements and access to education/skills/training											
Improvements and access to health											
Improvements and access to assets											
Improvements and access to natural capital											
Improvements and access to social capital											
Other											

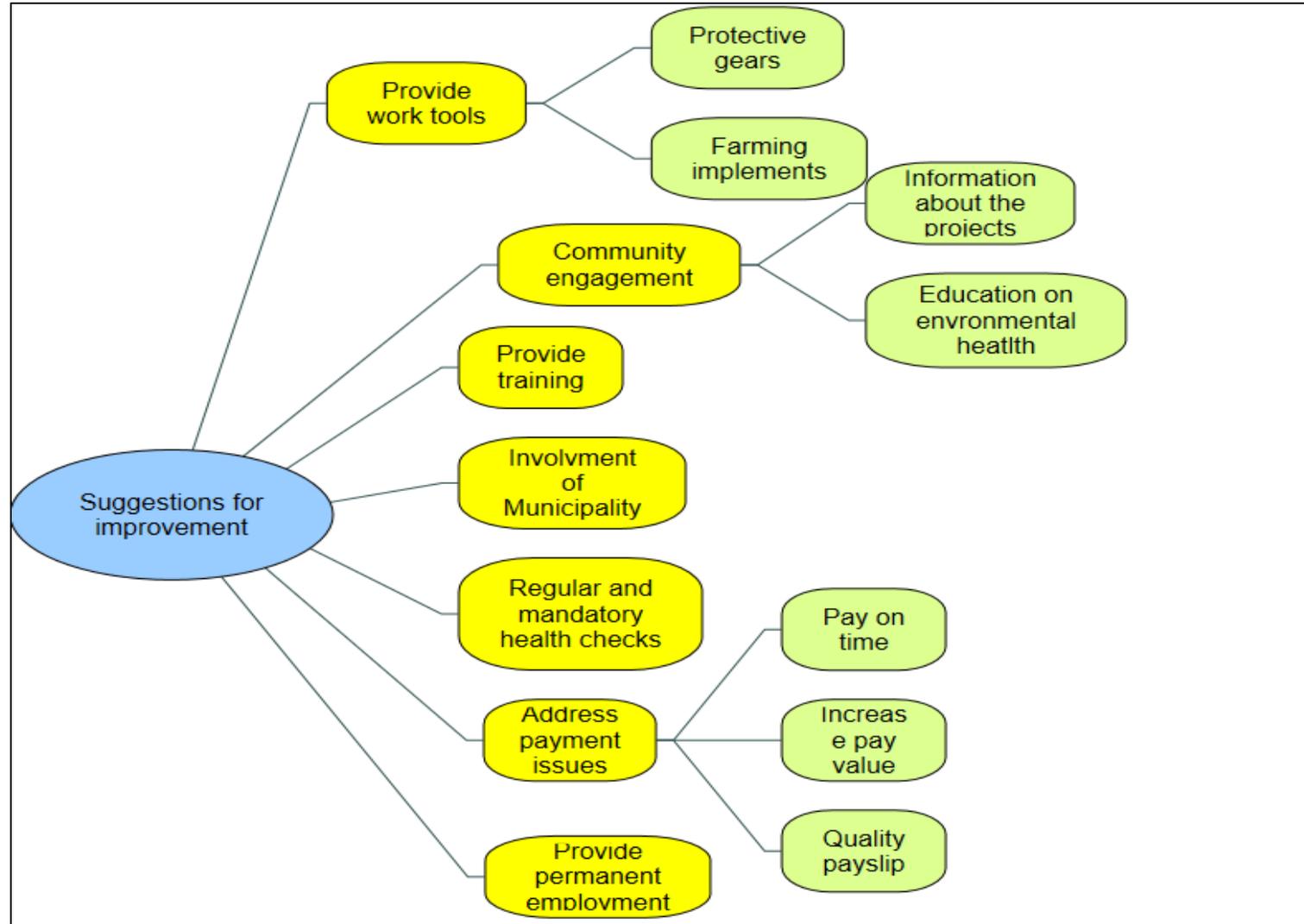


# Key research findings

	Project	Adaption/Mitigation	Match/Mismatch	Poverty reduction potential	Poverty reduction potential
1	Residential Energy Efficiency Programme	Mitigation	-M	N	M
2	Newlands Mashu Dewats - Evaluation for Waste Water Treatment and Reuse for Urban Horticulture	Adaptation	MM	M	L
3	Sihlanzimvelo Stream Cleaning Programme	Adaptation	MM	L	M
4	Paradise Valley Reforestation Project	Mitigation with secondary focus on adaptation	MM	M	M
5	The Umhlangane Catchment Rehabilitation Programme	Adaptation	MM	N	L
6	Durban Green Corridor	Adaptation	+M	L	M
7	Invasive Alien Plant (IAP) Control Programme	Adaptation	+M	M	N/A
8	Mariannhill Landfill Conservancy	Adaptation with secondary focus on mitigation	-N	N	N/A
9	Working on Fire	Adaptation	MM	L	M
10	Scorpio Place in Mariannridge	Adaptation	MM	N	L
11	Ubumbulu Agri-Hub	Adaptation	+M	H	L
12	Inkululeko Garden	Adaptation	N/A	N/A	L
13	Sibukeni Project: Hammersdale	Adaptation	N/A	N/A	L
14	Sphikeleni	Adaptation	N/A	N/A	L



# Key research findings



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# Key research findings

## Climate Change projects in eThekweni Municipality

Primary Category	Number of project (n=104)	%
Climate change mitigation	44	42.3
Climate change adaptation	60	57.7
	104	100.0%

# eThekweni climate change response themes

CLIMATE CHANGE THEME	Climate mitigation	Climate adaptation	All Projects
1. Water	4	10	14 (13.46%)
2. Sea level rise	0	2	2 (1.92%)
3. Biodiversity	3	12	15 (14.42%)
4. Food security	0	8	8 (7.69%)
5. Health	0	0	0 (0.00%)
6. Energy	20	2	22 (21.15%)
7. Waste and pollution	4	4	8 (7.69%)
8. Transport	4	0	4 (3.85%)
9. Economic development	2	4	6 (5.77%)
10. Knowledge generation and understanding	7	18	25 (24.04%)
<b>Total</b>	<b>44</b>	<b>60</b>	<b>104 (100%)</b>

# Asset Ranking of Poverty Reduction elements

POVERTY REDUCTION ASSET	# of mentions in project
1. Job and work opportunities	32
1. Education / skills development	28
1. Income / Wealth	19
1. Health	15
1. Utilities and Public services	15
1. Natural capital	14
1. Other	14
1. Assets	7
1. Social capital	6



# Relevance to KZN (PGDP)

- KZN - PGDP Strategic Goal #5: Environmental Sustainability
  - Strategic Objective 5.3: Adapt and respond to climate change
- KZN – PGDP Strategic Goal #1: Inclusive Economic Growth (cross cutting)
  - Indicator: Growth in the number of jobs of those employed in the green economy (TBD)
- KZN – PGDP Strategic Goal #3: Human and Community Development (cross cutting)
  - Indicator: 0% of household below the lower bound poverty line
- National level: The Disaster Management Amendment Act (2015)
  - local municipalities to combat risks through climate change adaptation (KZN: Plans and Disaster management centres)
- International level: Paris Agreement: nationally determined contributions (NDC)
  - integration of sub-national policy frameworks which enable climate change adaptation programmes, sub-national policy development and budget re-prioritisation for institutional capability, and adaptation planning at sub-national level
- eThekweni : Durban Climate Change Strategy (DCCS)
  - DCCS list of climate action, food security for the marginalised is of top priority, followed by the identification (profiling) of communities and sub-populations most affected by the impacts of climate change.

# Conclusions & Policy implications

- Case of eThekweni Municipality
  - Ready with locally appropriate projects once INDC comes into effect (influence National Adaptation Plans)
  - Even balance of climate change projects
    - Dominated by knowledge generation, biodiversity and energy. None in health
    - Some projects acknowledgement of poverty alleviation as a co-benefit (under 20%),
    - Space for mitigation to include poverty reduction co-benefits

# Conclusions & Policy implications

- The portfolio starting point
  - First step: Collaboration
    - Across municipalities, research partnerships with academia
  - Assist other municipalities
    - coordinating climate change projects and articulating poverty reduction co-benefits
    - Municipalities can play oversight role in projects contracted to other organisations

# Recommendations

- Further development of the CEBA approach
  - There is a need to move beyond a project-based approach to institutionalising climate changes to give permanence to the employment of people
  - Further understanding the local participation aspects within climate change project (ie indigenous knowledge)

# Conclusions & Policy implications

- Main conclusions of the study
  - Climate change projects extremely good at reducing poverty and creating jobs
- Policy relevance of the findings
  - Green economy not just an academic idea, but could be mainstreamed in NDP & PGDP
- Benefits and opportunities for policy thinking, planning and interventions
  - Global climate finance is available

# Recommendations

- Proposed necessary actions for taking recommendations forward to effect change
  - Use our protocol for choosing climate change projects with poverty reduction co-benefits across South Africa
- Where possible, specify what is in need of urgent attention and what is longer term
  - Urgent: Climate adaptation as protection from disaster using public funding
  - Longer term: Transfer to low-carbon economy and job creation using hybrid funding

# Acknowledgements

SIYABONGA! All our participants

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