PERCEPTIONS AND PREFERENCES FOR URBAN TREES ACROSS MULITPLE SOCIO-ECONOMIC CONTEXTS IN THE EASTERN CAPE, SOUTH AFRICA



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INTRODUCTION

- Urban trees across cities (Feng & Tan, 2017)
- Urban trees and quality of life (Duinker *et al*., 2015)
- Unequal distribution of urban trees between and within towns (McConnachie & Shackleton, 2010; Kuruneri-Chitepo & Shackleton, 2011)
- Drivers of unequal distribution (Fan *et al*., 2019; Gwedla & Shackleton, 2017)
- Momentum of urban forestry in South Africa
- Urban forest research in South Africa (McConnachie et al., 2008; McConnachie & Shackleton, 2010; Ward et al., 2010; Kuruneri-Chitepo & Shackleton, 2011; Shackleton & Blaire, 2013; Kaoma & Shackleton, 2014, 2015; Gwedla & Shackleton, 2015, 2017; Shackleton et al., 2015; Shackleton et al., 2018)

OBJECTIVES & HYPOTHESIS

1. To understand the perceptions of residents on the importance of urban trees across different suburb types, within multiple towns with differing socio-economic contexts in the urban settings of South Africa
2. Assess preferences for the structure and distribution of urban trees, and satisfaction with current distribution

Different perceptions within and between towns,
and more satisfaction among residents from
wealthier towns and suburbs than those from the poor

STUDY AREA & METHODS

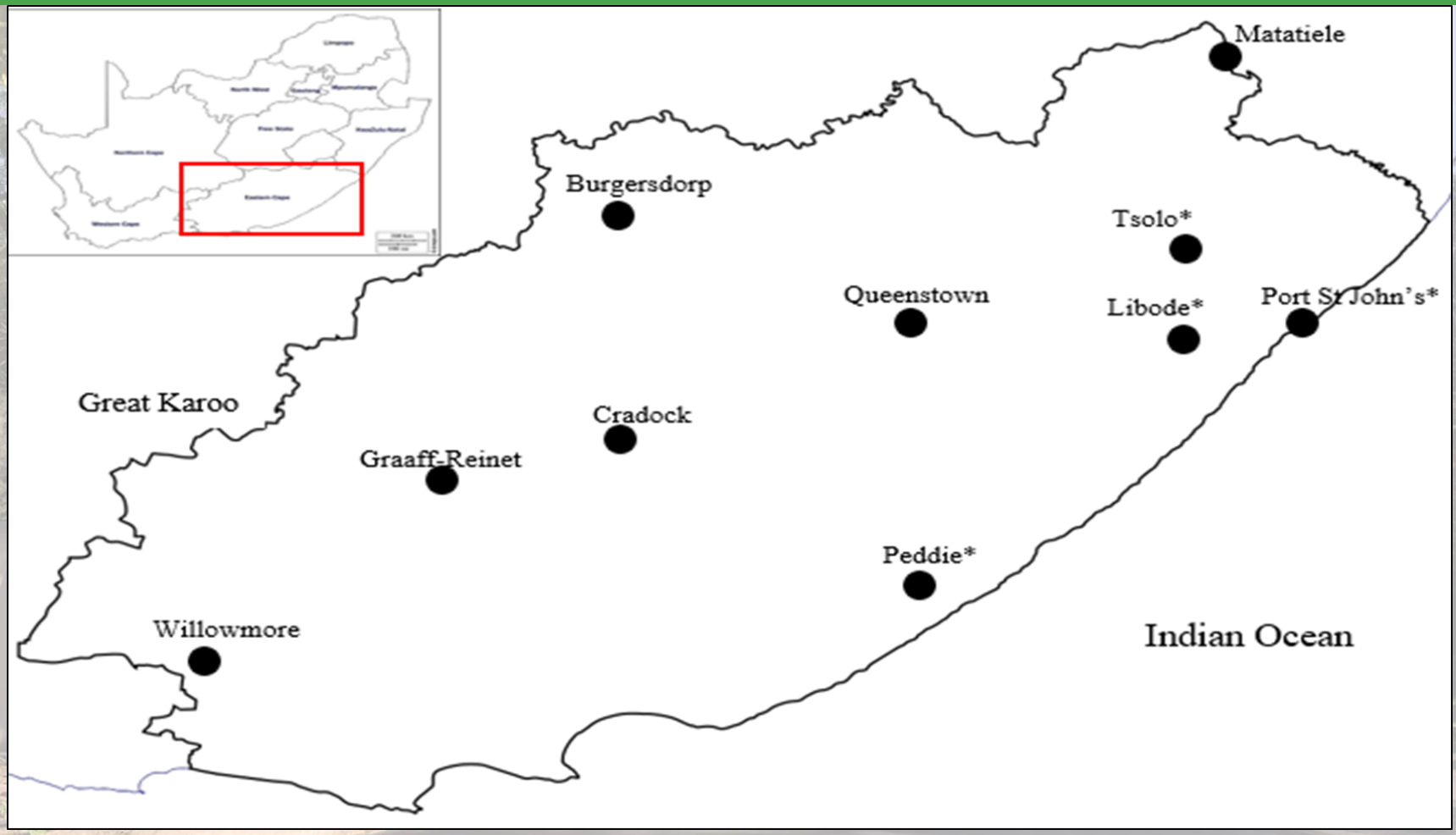

Figure 1: Location of study towns within the Eastern Cape province (*=former homeland towns)

STUDY AREA & METHODS

Objective 1 & 2

1 200 Households
10 Towns
10 of each affluent, township and RDP suburbs
120 Households per town (40 per suburb type)

Random selection

200 m transect x 10 per suburb

Present family member; preferred language

Instruments

Household surveys: Perceptions, preferences for, and attitudes towards urban trees;
Satisfaction with general appearance and number of street trees;
Respondent profile

KEY FINDING 1: POSITIVE PERCEPTIONS

Table 2: Respondents' perceived importance of trees for quality of life in towns based on their perceived importance of having trees on the street.

Trees and quality of life (n=1200)	Importance of street trees (n=1200)			
	Greatly Important	Moderately Important	Not Important	Total
Strongly Agree	715 (80%)	124 (14%)	56 (6%)	895 (75%)
Agree	81 (37%)	105 (44%)	45 (19%)	237 (20%)
Neutral	2 (8%)	8 (32%)	15 (60%)	25 (2%)
Disagree	3 (10%)	6 (19%)	22 (71%)	31 (3%)
Strongly disagree	0 (0%)	1 (8%)	11 (92%)	12 (1%)
Total	801 (67%)	244 (20%)	149 (12%)	1200 (100%)

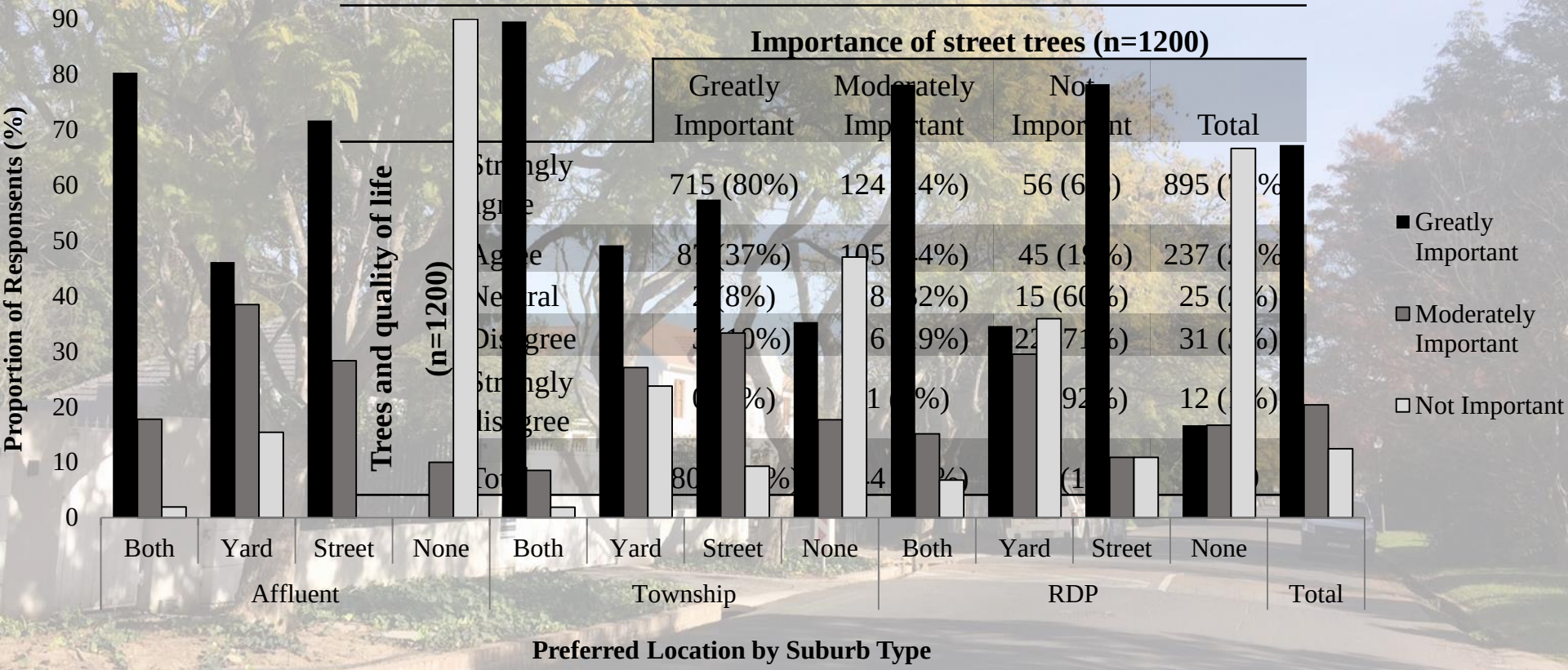

Figure 2: Residents' perceived importance of street trees based on their preferences for the location of planted trees within towns and between suburb types.

KEY FINDING 2: SATISFACTION WITH APPEARANCE & DISTRIBUTION

Table 3: General (dis)satisfaction with street and preference for location of planted trees (*=former homeland towns; *a*=high street tree density; *b*=medium street tree density; *c*=low street tree density).

Town	General (dis)satisfaction with street		Preferences for location of trees (n=1200)			
	Number of street trees	General appearance	Yard & Street	Yard	Street	Nowhere
Burgersdorp[a]	67 (%)	91 (7 %)	50 (42%)	49 (41%)	15 (12%)	7 (6%)
Cradock[b]	73 (%)	87 (7 %)	**87 (73%**	27 (23%)	6 (5%)	0 (0%)
Graaff-Reinet[a]	81 (%)	74 (6 %)	**79 (66%**	24 (20%)	14 (12%)	3 (3%)
Libode*,[c]	**88 (%)**	**104 (**	51 (43%	44 (37%)	20 (17%)	5 (4%)
Matatiele[b]	81 (%)	72 (6	69 (58%	31 (26%)	14 (12%)	6 (5%)
Peddie*,[c]	**111 (**	**108 (**	71 (59%	36 (30%)	12 (10%)	1 (1%)
Port St John's*,[b]	68 (	**107 (**	71 (59%	31 (26%)	6 (13%)	2 (2%)
Queenstown[b]	75 (63%)	90 (75%)	68 (57%)	25 (21%)	26 (22%)	1 (1%)
Tsolo*,[c]	**89 (74%)**	101 (84%)	45 (38%)	**52 (43%)**	18 (15%)	5 (4%)
Willowmore[b]	66 (55%)	71 (59%)	71 (59%)	33 (28%)	13 (11%)	3 (3%)
Total	799 (67%)	905 (75%)	662 (55%)	352 (29%)	153 (13%)	33 (3%)

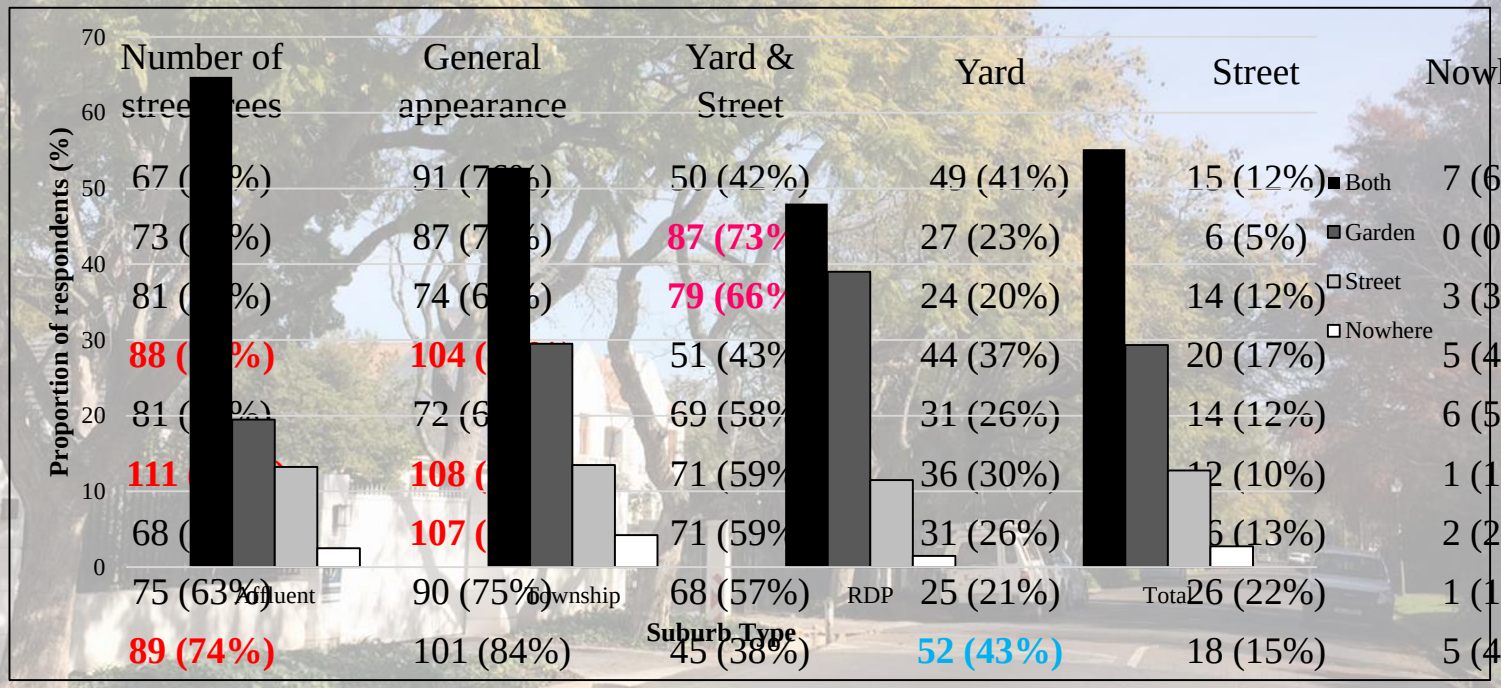

Figure 3: Preferences for the location of planted trees amongst respondents from the various suburb types across all towns.

KEY FINDING 2: SATISFACTION & PREFERENCES FOR TREE LOCATIONS

Table 4: Common reasons for satisfaction and dissatisfaction with the general appearance of streets (n=1 200).

Reason for satisfaction	Number of mentions – Suburb Type			Reason for dissatisfaction	Number of mentions – Suburb Type		
	Affluent (n=400)	Township (n=400)	RDP (n=400)		Affluent (n=400)	Township (n=400)	RDP (n=400)
Tar road	101	60	0	No tar road	69	107	326
Clean	89	57	14	Not clean	119	148	198
Well maintained	116	30	6	Dusty/Muddy	58	103	27
Many trees	95	11	3	No drainage system	26	82	162
Looks fine	42	31	17	No trees	39	77	113

Other: I like the way it is; wide road; proper drainage system; everyone else is satisfied; everything looks fine for this settlement; clear street view; lot of grass; proper gravel road.

Other: potholes; no paving/pavement; narrow road; not appealing and dull; smelly water all over; not maintained; no variety of trees; no flowers.

KEY FINDING 2: SATISFACTION & PREFERENCES FOR TREE LOCATIONS

Table 5: Common reasons for the various preferences for the location of planted trees.

Preference for location of planted trees	Reason for preference	Number of mentions			
		Suburb Type			
		Affluent	Township	RDP	Total
Yard and street	Shade	176	131	137	462
	Abundant fruit				
	Beautiful yards and streets				
	Protection from strong winds	31	36	49	116
	Oxygen provision	29	25	14	68
Yard only	Vandalism of trees on the street				
	Criminals hide behind the trees on the street				
	Shade for my house				
	Directly benefit from all trees	9	18	28	55
	Not enough space on the street	8	13	29	50
Street only	Not enough space in the yard	10	26	26	62
	Trees will make the yard look messy and dirty	12	20	6	38
	Tree roots will crack house walls	8	13	10	31
	Shade for passers-by	3	12	14	29
	No responsibility to take care of them	5	8	9	22
Not anywhere	I do not like trees	4	6	7	17
	No space for trees anywhere	2	2	4	8
	Criminals hide behind trees	1	3	2	6
	Trees are more dangerous than beneficial	1	2	3	6
	Trees cause allergies and make people sick	2	1	1	4

Benefits derived from urban trees

Behaviour resulting in disservices of urban trees

KEY FINDING 3: PREFERENCES FOR TREE SPECIES

Fruit species

Prunus persica

Prunus armeniaca

Malus domestica

Ficus burtt-davyi

Ornamental species: indigenous

Olea africana

Harpephyllum caffrum

Acacia karroo

Erythrina lysistemon

Ornamental: alien

Eucalyptus spp.

Angophora spp.

Corymbia spp.

Pinus spp.

CONCLUSION, IMPLICATIONS, RECOMMENDATIONS

- Hypothesis supported
- Dissatisfaction highest in former homeland towns and low-income areas
- Dissatisfaction mostly related to infrastructure and cleanliness
- Preferences for both fruit and ornamental tree species

- South Africa as a unique example- comparability

- *Key priorities to improving urban forest structure and distribution*
- *User-needs based planning and solutions*
- *Recognition of knowledge limitations and address these limitations*

FURTHER READING

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Residents and ward councillors from the following municipalities:

Blue Crane Route Municipality

Inxuba Yethemba Municipality

Dr. Beyers Naudé
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MALUTI A PHOFUNG MUNICIPALITY
SISONKE SOPHUMELELA

NGQUSHWA

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