CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Universiteit Utrecht

The grass is always greener behind the wall

The effect of demographic, socio-economic and locational factors on urban green space attitudes in the South Peninsula of Cape Town

Nina van Rijn

MSc Sustainable Development – International Development
Utrecht University, The Netherlands
September 2017

Master thesis

Student: Nina van Rijn
Student number: 5692865
Email address: vanrijnnina14@gmail.com

Host organization: City of Cape Town

Supervisor Utrecht University: Dr. Femke van Noorloos
Supervisor City of Cape Town: Joanne Jackson
Second reader: dr. Guus van Westen

Word count: 24,995

M.Sc. Sustainable Development – International Development
Faculty of Geosciences, Utrecht University
The Netherlands
12 September 2017

Abstract

Urban green spaces (UGSs) are, besides performing ecological functions, valuable for ensuring human quality of life in the city. In order to manage UGSs well, it is therefore important to understand the human perspective on these spaces. Especially since they are under increasing pressure of calls for infill or compact urban development to prevent unsustainable urban sprawl. This study will assess residents' urban green space perceptions, preferences, and use frequencies and motives (summarized under the term urban green space attitudes) in Cape Town, and specifically which individual (demographic and socio-economic) and locational factors influence people's UGS attitudes. This will enable the City of Cape Town to develop science-based UGS policy.

306 Questionnaire surveys and seven expert interviews have been conducted in the Southern Peninsula of Cape Town, a research area that represents the larger city well. The questionnaires focussed on gathering information on people's UGS attitudes, on their individual characteristics and on their *real* location. ArcGIS was used to calculate people's *relative* location: where people live in relation to their favourite and most frequently visited UGS and how much UGS is within their reach. The individual and locational factors were then used as independent variables in the statistical analysis, using STATA, predicting people's UGS attitudes.

The neighbourhood of residence tells us a lot about both people's individual characteristics and about their location. Due to the legacy of Apartheid, based on people's neighbourhoods, one can very well predict their household income, race, employment status and educational level, number of children, and access to a private garden. And naturally, the neighbourhood of residence tells us where people live relative to the UGSs they visit and whether they are likely to have to travel far to reach their desired UGSs. Since the mentioned individual characteristics and travel distance are important predictors of UGS attitudes, and since these are so closely linked to the neighbourhood of residence, it can be said that in Cape Town, the neighbourhood of residence predicts people's UGS attitudes.

Inequality between the neighbourhoods, in terms of endowment with UGS and the quality thereof, travel distances to desirable UGSs and visit frequencies, is large with the wealthier neighbourhoods disproportionally benefiting. In order to reduce this UGS related inequality, the City of Cape Town could lower both real (for example distance and safety issues) and perceived barriers (for example feelings of not being welcome) for the use of UGSs.
(397 words)

Acknowledgement

I would like to address the New World Foundation: Charmaine Josephs, Sheila Jacobs, Yolanda George, Shonia Isaacs, Pearl Daniels, thank you so much for your dedication with helping me collect survey data in Lavender Hill, and thanks to Kimendhri Pillay for making this possible.

I would like to thank Ivan Jones for his hospitality and for taking the time to show me around in Lavender Hill. I grew very fond of the Community Pride project and I am fascinated by what you give to the children of the community.

Thank you to Anthony Roberts and CTEET, for helping to make this research possible and for helping me out with interpreting my survey results. The latter also goes for Ivan Jones, Peter van Heerden, Louise Matschke, Dalton Gibbs, Stephen Granger and Fadiah Abbas who all spent their time to help me interpret my data.

Many thanks to dr. Femke van Noorloos for supervising me for the second time, placing trust in me to work on this research independently, but also to always be ready for honest and quick feedback. If I had to write another thesis, I would ask you again, but I think I'll choose to graduate instead.

Thank you dr. Guus van Westen for taking the time to evaluate this thesis.

Last but not least, I would like to thank the City of Cape Town. Thanks Ossie for inviting me. Thanks to my intern-colleagues Amy, Waarith, Skye and Rebekah. I have never felt welcome and at home in a new place this quickly and that is largely because of you. I am grateful for the warm welcome you gave me, the time you took to help me whenever I asked and for educating me in the South African cuisine, language and humour. Thanks Stephen for always being there as well. And last but not least, thank you so much Joanne! You also made me feel at home from day one, you were always there to help but you also gave me the freedom to work the way I preferred. I can't thank you enough.

Nina van Rijn,
Amsterdam, The Netherlands,
September, 2017

Table of Contents

List of figures

List of tables

List of appendices

1. Introduction

Urban green space provision is probably as old as human settlements. Green spaces are key components of urban ecosystems. Besides protecting biodiversity, urban green spaces provide many tangible and less tangible ecosystem services: social benefits are increasingly supplementing environmental and ecological functions (Barbosa et al., 2007; Jim & Chen, 2006; Lo & Jim, 2010). Public parks, urban forests, sport fields, street greenery, beaches and other 'green' areas provide outdoor recreational opportunities, microclimatic regulation, air and water purification, flood control, wildlife habitat, physical health promotion, stress relief, and they are places for social contact, sense of community, and to practice religion and traditions (Barbosa et al., 2007; Burgess, Harrison, & Limb, 1988; Herzele & Wiedeman, 2003; Jim & Chen, 2006; Qureshi, Breuste, & Jim, 2013; Tyrväinen, Mäkinen, & Schipperijn, 2007; Ward, Parker, & Shackleton, 2010; Zhang, Chen, Sun, & Bao, 2013; Zhou & Rana, 2012). As such, they are important factors for sustainable cities and for quality of life in the city (Lo & Jim, 2010; Schöpfer, Lang, & Blaschke, 2004; Tyrväinen et al., 2007; Ward et al., 2010), as also recognized by the eleventh Sustainable Development Goal (SDG) promoting inclusive, safe, resilient and sustainable cities and human settlements (United Nations, n.d.).

Also the New Urban Agenda, adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito in October 2016, envisages cities and human settlements that "prioritize safe, inclusive, accessible, green and quality public spaces that are friendly for families, enhance social and intergenerational interactions, cultural expressions and political participation, as appropriate, and foster social cohesion, inclusion and safety in peaceful and pluralistic societies, where the needs of all inhabitants are met, recognizing the specific needs of those in vulnerable situations" (United Nations, 2017). The Agenda recognized both socio-economic benefits and ecological benefits (United Nations, 2017).

Urban green spaces (UGSs) can be understood as open spaces situated within city limits that are predominantly covered in vegetation, be it planted deliberately or occurring naturally, indigenous or exotic, left by design or by default. (Jackson & Davison, 2016; Jim & Chen, 2006). Some researchers use the term *green infrastructure* instead, to indicate UGSs as a coherent planning entity (Zhou & Rana, 2012). For most urban dwellers, urban green spaces are their primary entry point to the natural world (Barbosa et al., 2007; Burgess et al., 1988; Zhang et al., 2013).

Despite the benefits UGSs provide, they are under increasing pressure from growing and increasingly urbanised populations and from calls for more sustainable urban growth through higher urban densities and infill development as an alternative to urban sprawl (Barbosa et al., 2007; Groenewegen, den Berg, de Vries, & Verheij, 2006; James et al., 2009; Schöpfer et al., 2004; Tyrväinen et al., 2007; Ward et al., 2010; Zhou & Rana, 2012). Perhaps paradoxically, this is also represented in the eleventh SDG with a target advocating to reduce the ratio of land consumption rate of the city to population growth rate (United Nations, n.d.). Also the New Urban Agenda prioritizes infill development as the way to manage natural resources and land surrounding urban areas sustainably: cities should be designed compactly and new neighbourhoods should be integrated into the existing urban fabric, preventing urban sprawl (United Nations, 2017).

Besides benefits, UGSs can also have negative effects on quality of life. They may be related to safety issues and perceived as dark and criminal places, cause nuisance from children and teenagers, induce vandalism, pose management costs, keep out sunshine, attract insects or pests, and occupy valuable urban land (Jim & Chen, 2006; Jim & Shan, 2013; Lo & Jim, 2010; Tyrväinen et al., 2007; Wright Wendel, Zarger, & Mihelcic, 2012; Zhang et al., 2013). Moreover, the provision of UGSs involves distributional justice and is often associated with urban inequality issues between neighbourhoods with different socio-economic status, especially in the Global South (Lo & Jim, 2010; Wright Wendel et al., 2012).

Providing adequate access to various types of UGSs for all socio-economic groups is an important step towards decreasing urban inequality and increasing distributional justice. This

is especially important in cities with large socio-economic disparity (Wright Wendel et al., 2012), such as Cape Town. Considering the human or social dimension is key in planning these precious UGSs. Green space provision entails understanding people's preferences, perceptions of the importance of UGS functions, use frequencies and motives, and visions for their future state and management (Jim & Shan, 2013; Lo & Jim, 2010).

Currently, decision-making on UGSs in the Global South is mostly based on assumption that lack empirical or theoretical support (Jim & Chen, 2006). Also, most scientific attention concerning attitudes towards UGSs has gone to industrialized countries (Balram & Dragićević, 2005; Barbosa et al., 2007; J. Burgess et al., 1988; Gidlöf-Gunnarsson & Öhrström, 2007; Giles-Corti et al., 2005; Groenewegen et al., 2006; Herzele & Wiedeman, 2003; Lindsey, Maraj, & Kuan, 2001; Maas, Verheij, Groenewegen, De Vries, & Spreeuwenberg, 2006; Rupprecht, Byrne, Ueda, & Lo, 2015; Schipperijn et al., 2010; Schöpfer et al., 2004; C. M. Shackleton & Blair, 2013; Tyrväinen et al., 2007), while especially cities as Cape Town, with its vast socio-economic and spatial inequality, could benefit from well-informed planning approaches for UGSs focussing on both users and excluded citizens (C. M. Shackleton & Blair, 2013).

The City of Cape Town realizes that the current trend for the city is to sprawl, and that the quality of urban green spaces is low. Its policy and strategy response is to identify densification areas and limit urban sprawl, and to aim to create a linked urban green space system of high quality, quantity and accessibility (City of Cape Town, 2012).

This study will assess residents' urban green space perceptions, preferences, and use frequencies and motives (from now summarized under the term 'UGS attitudes') in Cape Town. Studies measuring UGS attitudes usually take a questionnaire approach, after which these attitudes are mirrored against the socio-economic specifics of the respondents using simple quantitative analysis strategies such as analysis of co-variance and linear regression analysis (Balram & Dragićević, 2005). Studies focussing on citizens distance and physical access to certain types of UGSs, mostly use spatial GIS-analysis (Herzele & Wiedeman, 2003; Zhou & Rana, 2012). As Wright Wendel et al. (2012) mention, quantitative analysis into UGS attitudes based on questionnaires are rarely, and in Cape Town even never before, combined with spatial GIS-analyses, even though UGS provision is a spatial issue.

In order to understand the UGS attitudes of different groups of people in Cape Town, the following research question will be answered in this study: How do individual and locational factors relate to UGS attitudes, consisting of perceptions, preferences, and use frequencies and motives, in Cape Town? The research question will be answered by using survey and spatial data for quantitative and GIS-analysis, and qualitative analysis of in-depth interviews. The outcome of the research will be presented to the City of Cape Town and will help facilitate science-based decision-making.

Since a holistic picture of people's preferences, perceptions use and visions, but also non-use, of all different green spaces within people's reach is needed to inform the City of Cape, a study dealing with all types of UGSs within the city borders has been conducted. To arrive at a research that is feasible within given time and resource limits, one specific area of metropolitan Cape Town has been selected that houses a large variety of socio-economic groups. The suburbs of the South Peninsula that lie north of Muizenberg, including Muizenberg, have been selected since low, middle and high income communities (and coloured, black and white communities) are adjacent to each other here, which allows for comparison of the groups. This study could be replicated throughout the city.

2. Theoretical Framework

This section will first discuss some relevant theories and concepts in urban planning and in human behaviour. This will provide the necessary background knowledge for the study. Thereafter the concepts related to UGS attitudes that will be used in the research will be introduced, including an elaboration on the research that has already been done into to these concepts in various places in the world.

2.1 Theories and concepts

2.1.1 The sustainable city in the Global South

Urban areas have been conceptualized and theorized in a plethora of manners throughout their history. Urban concepts range from the nineteenth century garden city via the compact city to the present-day smart or eco-city (Delft, n.d.; Zonneveld, 1991), while cities have been theorized as, for example, metabolic systems, complex systems or clusters of creative and economic life (Florida, 2005; Kennedy, Pincetl, & Bunje, 2011; Sanders, 2008). While much of these urban concepts and theories focus on western cities, urbanization and urban growth are currently much higher in the Global South (Cohen, 2004).

In terms of urban-rural distribution, the Global North has a more urbanized population. Still, the vast majority of the world's urban population lives in the Global South at over seventy per cent. This number is expected to grow to eighty per cent, with a doubling of the number of people living in cities in the year 2030 as compared to 2000, from two to four billion (Cohen, 2006).

Urban growth in developing countries has generally been characterised by physical expansion or sprawl, as it has in Cape Town. For sustainability reasons, as shortly introduced in the Introduction, inwards development is recommended, and prescribed by both the SDGs and the New Urban Agenda, following the *compact city* tradition. It would reduce demand for transportation, as distances between urban function decrease, while leaving the city's natural or rural surroundings unchanged (Jenks, 2004). Burgess (2004, p. 9) defines the contemporary compact city approach as: "to increase built area and residential population densities; to intensify urban economic, social and cultural activities and to manipulate urban size, form and structure and settlement systems in pursuit of the environmental, social and global sustainability benefits derived from the concentration of urban functions." Especially given the urban populations and projected urban population growth in the Global South, policy makers and urban planners here are increasingly urged to implement compact urban development policies (Burgess, 2004; Tyrväinen et al., 2007), and to do so in an inclusive manner, which means having a structure for direct and democratic participation of civil society in planning and managing urban areas (United Nations, n.d.).

However, increasing urban densities through compact city approaches may not be desirable from an UGS point of view. Further densification increases problems such as local environmental degradation and biodiversity loss, and noise pollution due to overloaded infrastructure, overcrowding, local air pollution. While higher urban densities increase pressure on UGSs, UGSs actually help mitigating these problems (Burgess, 2004; Hardoy, Cairncross, & Satterthwaite, 1990; Tyrväinen et al., 2007).

2.1.2 The socio-ecological approach

Within research on leisure behaviour, the socio-ecological approach is popular as a framework for structuring and understanding the factors that influence human behaviour (Schipperijn et al., 2010). These frameworks highlight the influence that individual, social, physical environmental, societal and cultural factors have on human behaviour (Giles-corti, 2006), divided by Schipperijn et al. (2010) into individual and locational factors, as will also be done in this research. The approach is based on the idea that it is only possible to understand human behaviour, when an understanding is generated of people's interaction with their physical and social surroundings (Schipperijn et al., 2010; Thompson & Aspinall, 2011). Giles-corti (2006)

argues that, in order to positively influence people's behaviour (in his case, walking the recommended amount of time per week), policy-makers should not focus on either 'the people' or 'the place', but on both. Both a supportive physical and social environment (think of well-designed urban green spaces, a supportive infrastructure and policy that incentivizes good behaviour) should be created and positive cognitions should be provided (for example, in the form of public education mass media programs and public advocacy campaigns) (Giles-corti, 2006).

2.1.3 Spatial inequality and justice

Marxist urban political ecology provides an approach that helps to understand the interconnected social, ecological, economic and political processes that together result in uneven and unjust urban landscapes. The approach recognizes that the material conditions that form urban environments are controlled by and serve the interests of the elite at the expense of the less privileged (Heynen, Perkins, & Roy, 2006; Slater, 1975). Especially in the developing world "wealth and poverty are so closely juxtaposed in space. Obviously, these spatial inequalities are a direct reflection of underlying socio-economic inequalities" (Slater, 1975, p. 103). Therefore, when thinking about urban socio-environments, such as the urban green space, it is necessary to always consider who gains and who pays, and through which power relations unjust conditions are created and maintained (Heynen et al., 2006; Swyngedouw & Heynen, 2003). For example, Heynen et al. (2006) show that race and ethnicity and household income are correlated with the amount of urban tree cover within people's vicinity.

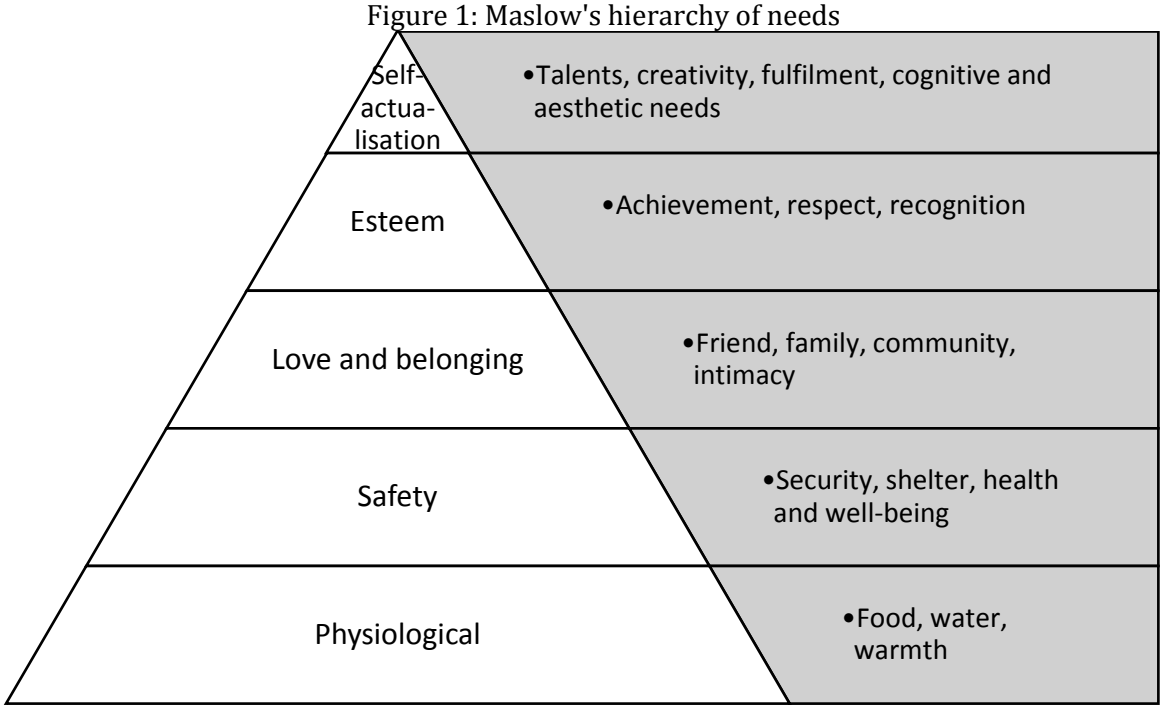
Historical-geographical insights are important in this understanding, since the power-laden socio-ecological relations that shape urban environments constantly shift. In a methodological sense, the addition of spatial analysis and Geographic Information Systems (GIS) facilitates the analysis of territorially based inequalities (Lobao & Saenz, 2002). For politics, the goal is to enhance the democracy of socio-environmental construction by generating strategies for equitable distribution of power and more inclusive environmental production (Swyngedouw & Heynen, 2003).

2.1.4 Maslow's hierarchy of needs

Maslow theorized human motivation as a pyramid of needs (see Figure 1) of which the lower levels must be fulfilled in order to rise higher on the hierarchy. Survival needs such as food, water and warmth have to be fulfilled before one can attempt to satisfy safety needs. Social needs, or love and belonging, in the form of friends, family and community come next, followed by 'esteem': achievement, respect and recognition. These are all basic human needs. After this, one can reach the highest need: self-actualization, which includes cognitive and aesthetic needs (Smith, Nelischer, & Perkins, 1997; Tweed & Sutherland, 2007).

This hierarchy of needs can be applied to visiting an UGS the way that Alfonzo (2005) applied it to going for a walk. Firstly, it must be feasible to go for a walk, or to visit an UGS, which is related to personal limits. Related to urban form, in increasing order, this is followed by needs including "accessibility, safety, comfort, and pleasurability" (Alfonzo, 2005, p. 818). Typically, an individual would not consider a higher-order need in the decision to visit an UGS or go for a walk when a more basic need, such as safety, is not yet satisfied. This means that, if the need of safety is not met, the person will likely not be motivated to visit an UGS, even if the person would find comfort and pleasure in doing so (Alfonzo, 2005).

Figure 1: Maslow's hierarchy of needs



Source: Tweed & Sutherland (2007)

2.1.5 Public good, club good, private good

Urban green spaces can be public goods, club goods or private goods. This research will only focus on attitudes towards public and club UGSs. The survey questionnaire inquires on people's ownership of a private UGS (garden or yard) as a potential predictor of people's UGS attitudes.

Figure 2 summarizes the different ownership types that can be distinguished. When an UGS is private, others can be excluded from use and when one person or group of persons use it, others cannot use it at the same time. For example, when a family owns a house with a garden, this garden cannot be owned and used by another family. When an UGS is a club good, other can be excluded, but the space being used by different people at the same time is possible. For example, a soccer field can only be used when yearly contribution is paid, but for those who do, use of the field by one person does not prevent its use for another person. If an UGS is public, people cannot be excluded from using it and its use by one person does not prevent others from using it as well (Cvejic et al., 2017; Mcnutt, 1999).

Figure 2: Ownership types

Excludability \ Rivalry in consumption	High	Low
High	Private good	Club good
Low	Common good	Public good

Source: Cornes & Sandler (1996)

2.2 Urban green space attitudes

The basic theories and concepts of urban planning and human behaviours are now clear. The following sub-sections will go more deeply into the theory of UGS attitudes and of analysing UGS attitudes. From this the conceptual framework follows that forms the basis for the empirical part of this study.

2.2.1 Evaluating urban green space attitudes

Enquiries into the use of UGSs in the past ten years are divided by Schipperijn et al. (2010) into three main groups. The first category is that of studies focussing on the characteristics and use of one specific green space, for example New York Central Park. The second group focusses on one specific type of green space, and attitudes associated therewith, for example 'urban forests'. Group three deals with the use of all types of green spaces in the vicinity of the respondent's home in a particular city or neighbourhood, for example the Southern Peninsula of Cape Town. This research fits within the third category. Previous studies in this category generally show that there is a significant difference in the use of UGSs between segments of the population (R. W. Coles & Bussey, 2000; Galloway, 2002; Payne, Mowen, & Orsega-Smith, 2002; Sanesi & Chiarello, 2006; Sasidharan, Willits, & Godbey, 2005; Schipperijn et al., 2010; Tinsley, Tinseley, & Croskeys, 2002; Yilmaz, Zengin, & Demircioglu Yildiz, 2007).

2.2.2 Principles for evaluating urban green space provision

Herzele and Wiedeman (2003) have developed a list of guiding principles that researchers can use to evaluate UGS provision. First, like Coles and Caserio (2001), they argue that citizens should be taken as a point of departure, not the green space itself. Namely, green spaces are intended to support citizens' quality of life. Therefore, UGSs should be considered in relation to where people live. This way both green space use and non-use are included, in contrast to when a specific green space and its visitors are taken as a point of departure. This approach fits within the third category of UGS-attitude evaluations identified by Schipperijn et al. (2010), discussed above.

Secondly, Herzele and Wiedeman (2003, p. 110) argue, "green spaces inside and outside the city are no substitutes for each other and both are perceived in different ways. Urban greening should be evaluated in relation to the relevant functional scales, ranging from street to city level." They have defined five different *functional levels* for UGSs: residential green, neighbourhood green, quarter green, district green, city green and urban forest. These functional levels may not be applicable to every city, however. Not every city has urban forests, but other types of nature reserves such as wetlands. Also, beaches are not included by Herzele and Wiedeman.

The third principle relates to preconditions for use. If a green space is too far, inaccessible due to fences or unstable ground, or unsafe, people will not be attracted to the green space (Herzele & Wiedeman, 2003). In other words, when the lower rungs of Alfonzo's (2005) interpretation of Maslow's hierarchy of needs are not fulfilled, one will not use the UGS.

Fourthly, the variety of qualities needs to be assessed. A varied provision of UGSs, if not within one space then for the total supply on different functional levels, ensures an array of experiences and activities related to UGSs (Herzele & Wiedeman, 2003).

Lastly, uses should be regarded. People use different green spaces freely and often with no regard to their original purpose. Therefore, all UGSs, both formal and informal, should be considered: all can contribute to citizens' quality of life (Herzele & Wiedeman, 2003).

Additionally, Coles and Caserio (2001) and Tyrväinen et al. (2007) suggest that, in order to understand UGS provision, data should be collected dealing with both perceived positive and negative features of UGSs.

2.2.3 Previous studies into urban green space attitudes

Research into the relation between socio-economic factors and UGS attitudes is not scarce. The literature from different cities around the world shows some general patterns: attitudes do vary between sections of the population, mainly between income groups, age, race or ethnicity and residential location.

Wright Wendel et al. (2012), who interviewed visitors of 281 UGSs in Santa Cruz in Bolivia, found that there is inequality in the degree to which different socio-economic groups of society have access to green spaces close to their homes. The larger and more desirable UGSs in Santa Cruz are found in higher income parts of the city. Abstract barriers of UGS use, such as poor maintenance, lack of facilities and unsafe conditions, mainly impacted women, elderly people, people with lower incomes and those living towards the outskirts of the city. Security guards and fences took away the most important entry barrier, feelings of unsafety.

In Ohio, older adults and black people are less likely to visit UGSs. In comparison to age and residential location, race most strongly predicts people's preference for UGS functions (conservation versus recreation), while both age and race are the strongest predictors of UGS attitudes in general. However, it became clear that other factors than age, residential location or race are probably more important predictors of UGS attitudes (Payne et al., 2002).

Zhang et al. (2013) assessed the relationship between gender, education, income and residential location on the one hand and residents' recreational activities in UGSs on the other hand in Fuyang, China. All four respondent's characteristics are significantly associated with differences in recreation needs in green spaces. People between 45 and 64 years old have the highest recreational needs, while needs decline with increasing education level.

Schipperijn et al. (2010) report that in Denmark, there is a large correlation between distance to UGSs and the use of them. Also gender and age prove to be statistically significant for UGS use. Individuals with shorter education and with a non-western ethnic background have lower odds of visiting UGSs at least a few times a week compared to people with a Danish background.

On the other hand, Qureshi et al. (2013) could not find statistical validation for the assumption that socio-economic circumstances influence urban landscape preferences, during their study into UGS perceptions in Karachi, Pakistan. This contrasts with Jim and Shan's (2013) findings for Guangzhou, China. Gender, age, marital status, education, occupation and location of residence were all significant factors in determining people's UGS perception.

2.2.4 Perceptions of importance of different urban green space functions

Perceptions of the importance of different functions of UGSs is arguably the most popular topic in UGS attitude research. Wright Wendel et al. (2012) inquired into people's perceived importance of UGS functions with an open interview question to allow free choosing of words. The most often stated functions were place to relax, to socialize and for children to play. Least often, learning more about the country and experiencing wildlife were chosen. The latter was also least important in Hong Kong, together with symbol of identity. Here, perhaps unsurprising, reducing air pollution was stated as most important, followed by enhancing aesthetic quality, promoting health, lowering urban air temperature and providing children's playground (Lo & Jim, 2010).

In the small towns of Fort Beaufort and Port Alfred in South Africa, a third of all respondents found the provision of space for relaxation and recreation the most important function of UGSs. The second most frequently stated function was that UGSs create maintenance jobs. Hereafter, environmental and aesthetic benefits were seen as equally important. Conservation of biodiversity, attracting tourism and promoting human well-being were least often indicated as important functions (Shackleton & Blair, 2013). In both Guangzhou (China) and Helsinki, promoting health and reducing stress ranked among the most important functions. Contact with nature and social interaction were unimportant functions in Guangzhou, and in Helsinki increased housing prices and shelter from the sun were deemed unimportant (Jim & Shan, 2013; Tyrväinen et al., 2007).

2.2.5 Urban green space preferences

There is a lot of research focussing on the visual preferences of people for different landscapes. For example, Van den Berg & Koole (2006) found that people's preference for wild scenes over managed or designed green spaces were correlated with their place of residence, socio-economic status, age, preference for green political parties, farming background, and recreational motives.

With respect to preferred features of UGSs Lo and Jim (2010) and Qureshi et al. (2013) did research in Hong Kong and Karachi respectively, although not using the same indicators. Concerning park facilities, over half of respondents in Hong Kong preferred a lot of trees, while having a lot of seats was seen as not important. Residents prefer one large park over multiple small ones. Also in Karachi having a lot of trees was most preferred, followed by clean areas, lighting and nature views. The presence of barbecues, fountains and playing utilities were seen as less important (Lo & Jim, 2010; Qureshi et al., 2013).

2.2.6 Urban green space use frequency and motives

Use frequencies and motives are very context-specific. For example, frequency of use in Helsinki largely depends on the season, with many more people visiting UGSs in summer relative to winter. These results are difficult to relate to the situation in Cape Town, where weather variations between seasons are much smaller than in Helsinki. In Helsinki, the most active UGS users are families with small children and people between 31 and 45 years old (Tyrväinen et al., 2007). In Santa Cruz, most respondents use UGSs more than three times a week. The smallest group of people are those that never visit UGSs (Wright Wendel et al., 2012).

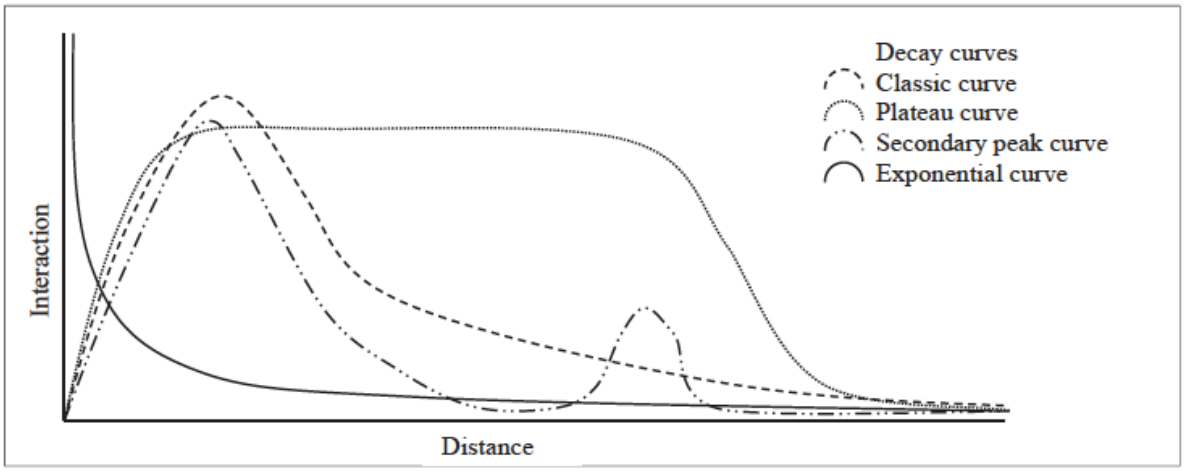
The most popular reason to visit botanical gardens in South Africa is for enjoying its natural beauty, followed by exercising. Visiting them to bring out of town visitors or to attend a concert are least often stated (Ward et al., 2010). In Denmark, the most popular reason to visit green spaces is to enjoy the weather and get fresh air, especially among women, followed by reducing stress and to relax, to exercise, and to do something together with friends and family. To obtain peace and quiet without noise is the least often stated reason (Schipperijn et al., 2010). In Hong Kong, UGSs are mostly visited to exercise or stroll. The second most popular reason is to breathe clean air. The least popular reason is to enjoy the cool environment, followed by taking the children to the playground (Lo & Jim, 2010). Again, reasons for visiting UGSs are very context specific and depend on, for example, local cultures. Therefore, section 2.2.8 will shortly discuss the literature on South African UGS attitudes.

2.2.7 Distance-decay effect

There is a strong relation between frequency and use and the distance to UGSs. In 1991, Eldridge & Jones (1991, p. 500) wrote that "few concepts are more central to the discipline of geography than distance decay". Distance plays a role in a variety of human-environment interactions, such as the demand for recreation. As such, the relation between urban green spaces and travel distances to them have attracted substantial attention from scholars (Rossi, Byrne, & Pickering, 2015). Distance-decay has often been empirically proven to be true (Hanink & White, 1999; Nielsen & Hansen, 2007; Rossi et al., 2015; Schipperijn et al., 2010). For example, Hanink & White (1999) found that people who live closer to national parks in the United States, visit more these frequently, but also for a shorter amount of time. The distance-decay effect has serious implications for people's use of UGSs, especially since the amount of UGSs is globally declining. Insufficient use of UGS can lead city residents to experience problems with mental and physical health, and can diminish people's understanding of the environment (Rossi et al., 2015).

Rossi et al. (2015) publish four different distance-decay curves that have been identified throughout the human geography literature, see Figure 3. Different curves exist due to differences in transport technology and network accessibility, and since distance-decay effects do not only relate to the physical environment, but also to socio-economic and demographic factors, and to people's UGS attitudes. The exponential curve is the most common one.

Figure 3: Distance-decay functions



Source: Rossi et al. (2015)

2.2.8 UGS attitudes in South Africa

C. M. Shackleton & Blair (2013), S. Shackleton et al. (2015) and Ward et al. (2010) are the only scholars writing about UGS attitudes in South African towns and cities, respectively on perceptions and use of UGSs in the two small towns of Fort Beaufort and Port Alfred in the Eastern Cape, the benefits and values of trees in the small towns Bela Bela and Tzaneen in the Limpopo Province in the Northernmost part of South Africa, and on the appreciation and use of botanical gardens in six national botanical gardens, of which one, Kirstenbosch Gardens, is found in Cape Town.

C. M. Shackleton and Blair (2013) found that across suburbs and between the towns of Fort Beaufort and Port Alfred, distances to the nearest UGS were similar. Most people found access to UGSs important, found the supply of UGSs insufficient and found that the local government was inadequate in providing and maintaining UGSs. The lower the supply of UGSs, the higher the level of dissatisfaction. People in the wealthier towns and suburbs were willing to pay more to improve the situation than people in the poorer areas, while the latter were willing to spend more time on improving the situation than the former.

S. Shackleton et al. (2015) concluded that in all neighbourhoods, poor and wealthy alike, trees in public spaces were associated with (perceptions of) crime. Trees in the informal settlements provide especially 'provisioning services' in the form of supplies of wood and energy, while also their importance for 'regulatory services' such as offering shade is recognized. People in the older townships (government housing) especially appreciate the aesthetic value of trees as well as fruit provision. Residents of low-cost housing neighbourhoods mostly value the shade trees cast on their gardens.

Ward et al. (2010) surveyed visitors and staff of botanical gardens. The gardens were said to provide benefits in terms of education, recreation and conservation. They attract mostly white, English-speaking, highly educated, middle- to old-aged people with medium to high incomes. Most people visited the gardens for psychological and recreational purposes rather than educational ones. It is especially staff that emphasized the latter. Visitors found UGS provision in their cities and towns insufficient, and most visitors appreciated the conservation function of botanical gardens.

2.3 Conceptual framework

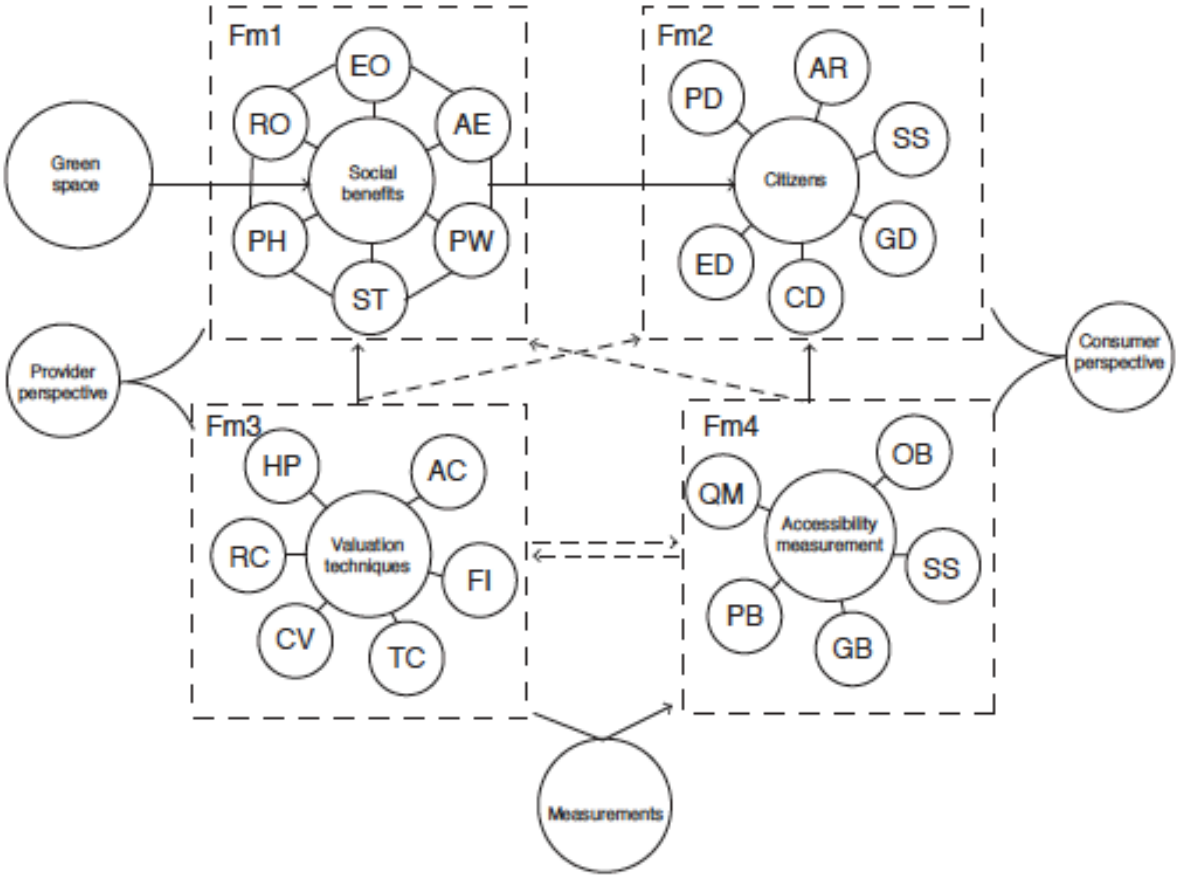
Zhou & Rana (2012) present a conceptual framework for the valuation of UGSs and their social benefits. They argue that it is useful to assess people's attitudes towards UGSs together with their socio-economic status, since different groups of people use and perceive UGSs in different ways. This framework in shown in Figure 4. It combines citizens' socio-economic characteristics

with social benefits of UGSs, different types of accessibility measurements and green space valuation techniques.

This conceptual model suggests valuing market and non-market properties of UGSs in monetary terms. Different valuation techniques are discussed, such as the contingent valuation technique, in which people state their hypothetical willingness to pay in order to obtain the benefits from the green space.

Also different methods for assessing UGS accessibility are discussed. The opportunity-based technique measures distance from the residential location to the nearest UGS, or measures the number of UGSs within a certain distance from the residential location. The gravity based model is a method of measuring accessibility that incorporates UGS attractiveness, which allows for the distinction of different green spaces by their attributes. This model can also incorporate a distance decay function, which reflects a decreased UGS use intensity with increasing distance (Zhou & Rana, 2012).

Figure 4: Conceptual model for urban green space valuation



Notes: In Fm1: EO, educational opportunities; AE, aesthetic enjoyment; PW, psychological well-being; ST, social ties; PH, physical health; RO, recreational opportunities; in Fm2:PD, professional difference; AR, age range; SS, socioeconomic status; GD, gender differences; CD, cultural differences; ED, educational differences; in Fm3: HP, hedonic price model; AC, avoid cost; FI, factor income; TC, travel cost; CV, contingent valuation; RC, replacement cost; in Fm4: QM, qualitative measurement; OB, opportunity-based model; SS, Spatial separation model; GB, gravity-based model; PB, person-based model

Source: Zhou & Rana (2012)

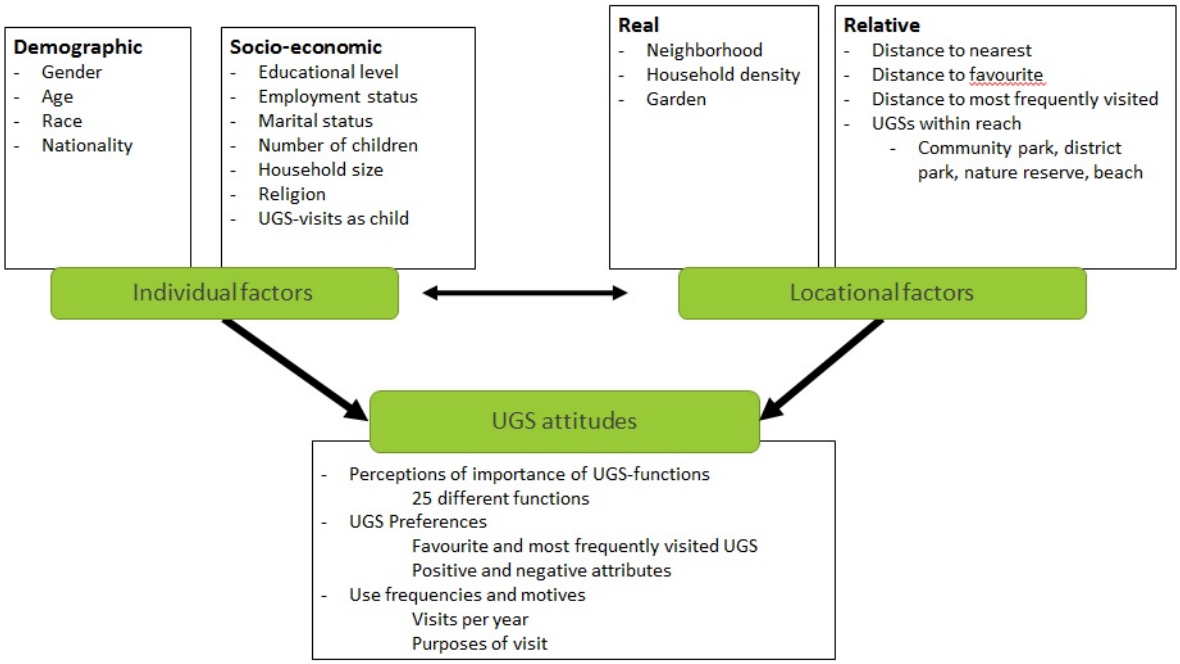
Based on this conceptual framework, and all the researches that were introduced in this section, a conceptual framework fitted to the situation in Cape Town and to the aim of informing the City of Cape Town on people's UGS attitudes, a new conceptual framework has been developed that will form the foundation of this study.

Whereas the conceptual framework of Zhou and Rana (2012) only incorporate social functions of UGSs, the new conceptual framework also includes environmental, economic and cultural functions, resulting in a list of 25 different UGS functions. Like in Figure 4, the new framework includes a range if demographic and socio-economic characteristics. Of the five proposed accessibility measures proposed by Zhou and Rana (2012), the opportunity-based model will be used, that calculates the distance of the residential location to the UGSs. Following the socio-ecological approach, the new framework pays some more attention to locational factors, besides distance. Neighbourhood of residence, household density in the neighbourhood, access to a private garden and the area of different functional levels of UGSs within respondents' reach are included. Monetary valuation of UGSs will be left out, since it is outside the scope of this research.

Figure 5 shows the revised conceptual framework, including a more detailed overview of the indicators that will be used to assess UGS attitudes. Following Schipperijn et al.'s (2010) interpretation of the socio-ecological approach, the attributes influencing UGS attitudes are divided into individual factors and locational factors. Individual characteristics are divided into demographic and socio-economic indicators. Locational characteristics are divided into real and relative location. Real locations describe where respondents actually live. Relative locations will be calculated for each respondent individually. The 'distance to favourite' and 'distance to most frequently visited' depends on individual choices on the UGSs that people actually visit. UGS attitudes consist of perceptions of importance, preferences, and use frequencies and motives.

The figure shows a relation between individual and locational factors. In the next section, it will become clear why these are strongly linked in Cape Town.

Figure 5: Conceptual framework



3. Research context

Cape Town is a city of large spatial inequalities. In order to grasp the differences between people's UGS attitudes, an understanding of the historical-geographic background is needed. Therefore, before proceeding to the empirical part, the research area and its history will be explained. The City of Cape Town, for which this research was conducted, will also be shortly introduced.

3.1 Research area

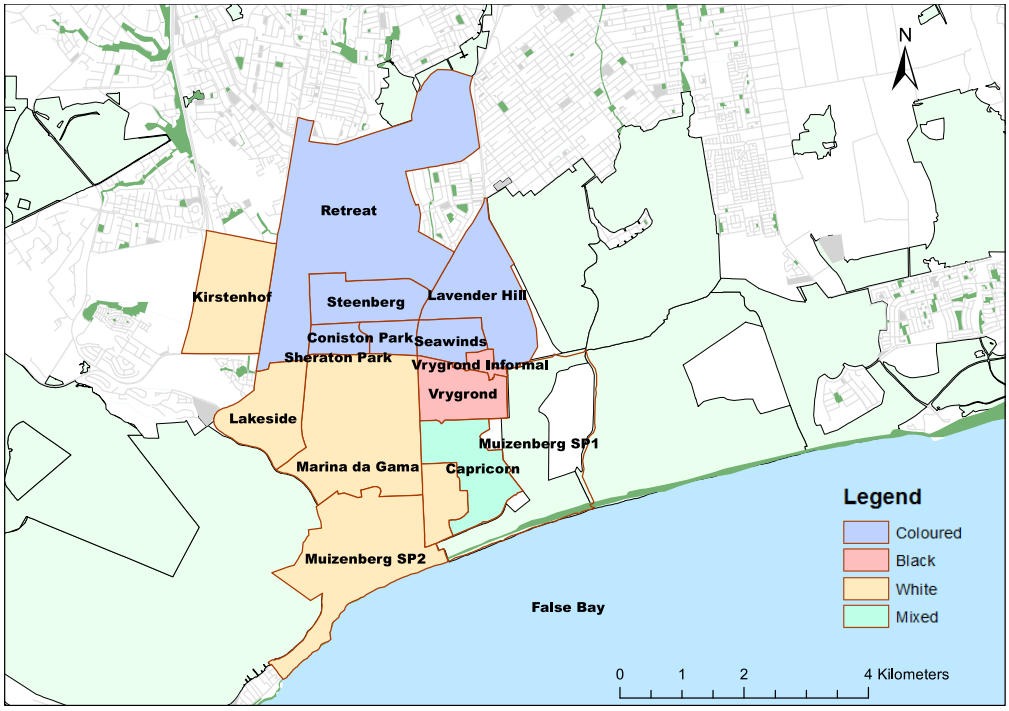
Cape Town is situated in the Western Cape, in the South West of South Africa. The research area is located on the northern edge of the South Peninsula of Cape Town, some 25 kilometres away from Cape Town Central Business District (the city centre of Cape Town), located in the False Bay area (see Figure 6). The research area consists of twelve neighbourhoods. All types of neighbourhoods are represented, ranging from very low income (Lavender Hill, Capricorn and Vrygrond) to very high income (Lakeside, Marina da Gama), from informal settlements (Vrygrond Informal and parts of Lavender Hill) to government housing (Lavender Hill) and to large private houses (Muizenberg, Lakeside, Marina da Gama). There is one black community, six coloured communities, five white communities and one mixed community (see Figure 7). These range of characteristics within the neighbourhood make the research area representative for larger Cape Town, which will be proven in section 4.3 Choice of research area.

The UGSs in the research area can be seen in Figure 8 on page 14. On the west side of the research area, the Muizenberg Mountains and the Silvermine Dam Area are located, both part of Table Mountain National Park. False Bay, to which the research area borders on the South, is part of the Atlantic ocean. Here, Muizenberg Beach (also named Sunrise Beach) can be found. At the centre of the research area, Zandvlei Estuary, a fenced nature reserve that is open to visitors, and Zandvlei District Park, a park with braai amenities and play equipment for children, are situated. All neighbourhoods that lie to the east of Zandvlei Estuary, are part of the so-called Cape Flats. To the east, the research area is bordered by the Strandfontein Sewer Works with man-made water bodies that now form unique bird habitats. Here also Zeekoevlei and Rondevlei are found, two fenced nature reserves. Rondevlei is the only place in Cape Town where hippos live.

Figure 6: Cape Town and research area

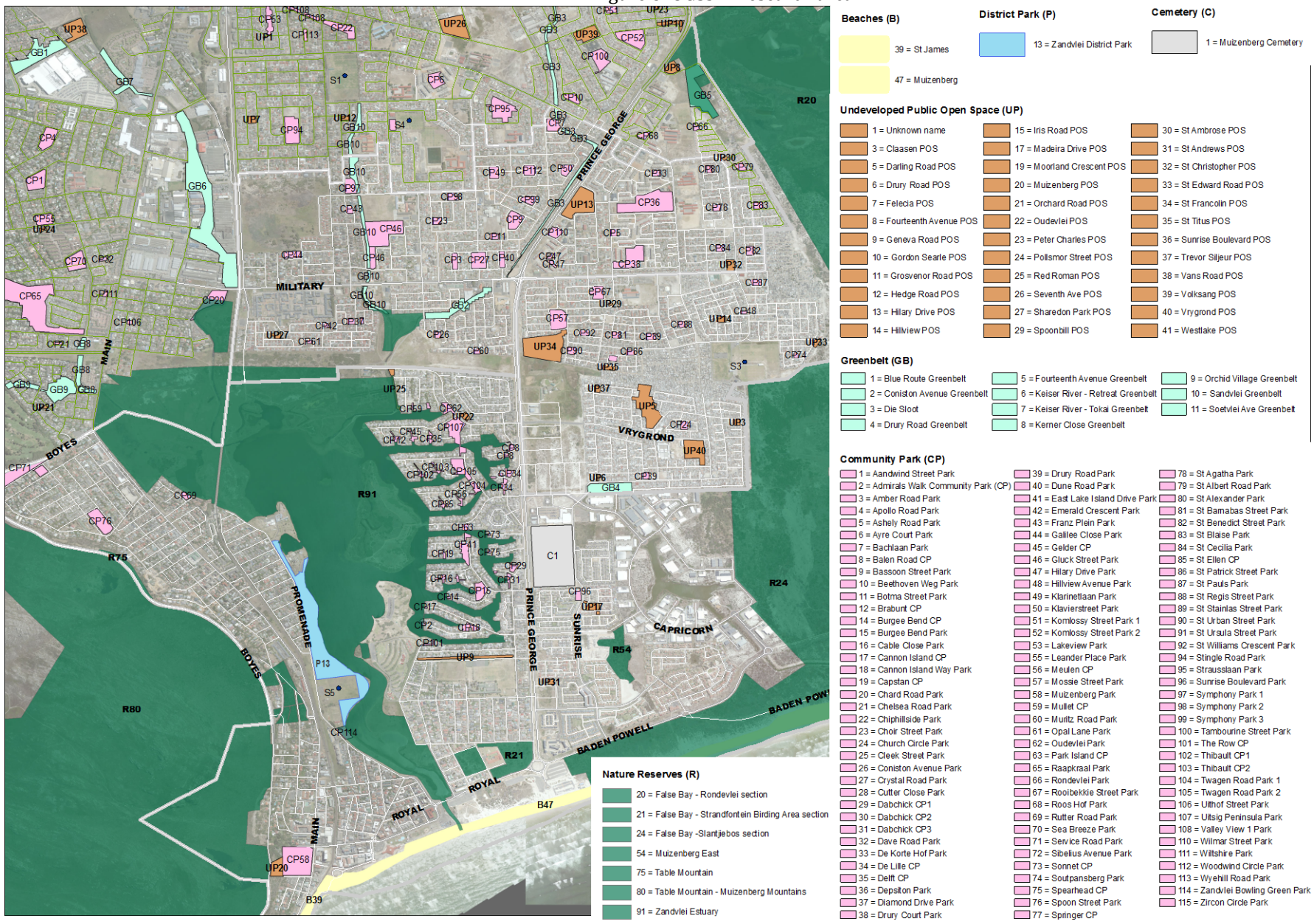
Spatial data: City of Cape Town (n.d.-a); Map: Nina van Rijn

Figure 7: Research area, by predominant race



Spatial data: City of Cape Town (n.d.-a); Map: Nina van Rijn

Figure 8: UGSs in research area



To get a better idea of how the different neighbourhoods look, a screenshot of one typical streetscape per neighbourhood is shown in Figure 9. The contrast between the different neighbourhoods can clearly be seen.

Figure 9: Impression of neighbourhoods

a. Lavender Hill

b. Seawinds

c. Vrygrond

d. Capricorn

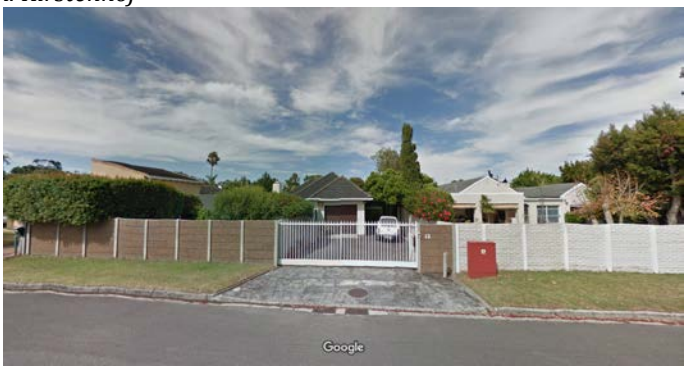
e. Steenberg

f. Retreat

g. Sheraton Park

h. Coniston Park

i. Kirstenhof



j. Muizenberg

k. Lakeside

l. Marina da Gama

3.2 Historical context

Cape Town was established in 1652 by the Dutch as a restock station for the East India Company. In the early 19th century, it was seized by the British. Cape Town's population grew steadily and the urban area grew with it.

In 1910 the foundations of the current unitary South Africa were laid with the Act of Union, linking the Boer republics in the Transvaal and Orange Free State with the British colonies of the Cape and Natal, with Pretoria as administrative capital and Cape Town as legislative capital. Around this time, Native policies started to be developed, with an explicit goal of racial segregation, mainly focussed on "Bantu's" (black Africans). In 1923 the notorious Urban Areas Act was passed in Cape Town, assigning desirable urban areas to white people. Government housing estates were being constructed on the Cape Flats for coloured working class families. The wealthier areas were predominantly white, both because of preferential legislation and because of market forces: white people were generally wealthier because they were assigned the best lands and because the best-paying jobs were reserved for white people. Around this time, most neighbourhoods remained mixed, some of them because of informal settlements within wealthier areas (Lemanski, 2007; Wilkinson, 2000).

The ruling National Party passed the Population Registration Act in 1950 which mandated systematic race classification with the explicit goal of 'total apartheid'. The Group Areas Act and Reservation of Amenities Act extended the rigid spatial segregation that already applied for black Africans to coloured and Indian people. This led to the relocation and forced removal of the people of flourishing communities, most famously of District Six that was designated as a "White Group Area". By the end of the 1960s approximately 150,000 people were relocated to the public housing areas, better known as townships, mainly built on the Cape Flats (Turok, 2001; Wilkinson, 2000). Since the working class that lived here was believed to have no demand for recreation, which was only to be enjoyed by whites, but was only supposed to work and survive, no attention was paid to creating public spaces such as parks (Turok, 2001).

Despite the Coloured Labour Preference Policy that reserved certain occupations for coloured people, for which black Africans were thought to be not suitable, the influx of black Africans into Cape Town was enormous. The provision of government housing could not keep up,

so by the 1980s Cape Town saw vast informal settlements around the city's periphery. The townships and informal settlements of especially the Cape Flats were ungovernable. For white people, this was a time of unprecedentedly high levels of prosperity, leading to low density suburban sprawl towards, among others, the valleys of the Southern Peninsula (Wilkinson, 2000).

Starting with the unbanning of the African National Congress of which Nelson Mandela was a member, the National Party under De Klerk started a path towards abandoning apartheid policies and transitioning to full democracy (not only for whites, as it had been for centuries) (Mandela, 1994; Wilkinson, 2000).

3.3 Current situation

In ecological terms, Cape Town's setting is unique. The Cape is home to one of the world' six floral kingdoms, due to its indigenous fynbos. Fynbos is under pressure of increased urban development, agriculture and the highly invasive acacias brought from Australia (Wilkinson, 2000). Together with its beautiful beaches, celebrated wine farms and of course the magnificent Table Mountain, makes Cape Town into a beloved tourist destination.

Also in socio-economic terms, Cape Town, that is still the legislative capital of South Africa, is an interesting place. "The economic and social forces that emerged under *apartheid* did not suddenly expire with the advent of democracy." (Turok, 2001, p. 2350) Its legacy is locked in the layout of the city and in institutional and social practices. Wide income inequalities segregate people into neighbourhoods of different quality. Apartheid ideology focused on separate spatial, economic and human development of different races, favouring white minorities. Non-white people growing up under apartheid, as well as their offspring, still have less development opportunities today: black African and coloured families are trapped in an apartheid configuration of unattractive and segregated neighbourhoods with bad housing, little commercial opportunities, and few aesthetic futures and urban green spaces, while white suburbs remain green and well serviced (Lemanski, 2007; Lohnert, Oldfield, & Parnell, 2017; S. Shackleton et al., 2015; Turok, 2001).

Today, there is a consensus at national and local levels on the importance of urban integration in South Africa. Namely "Apartheid planning has left deep scars on the spatial structure of our cities, towns and rural areas, and the lives of millions of individuals and households. The spatial integration of our settlements is critical" (Ministry for Provincial Affairs and Constitutional Development, 1998, p. 24). This aspiration is also shared by the City of Cape Town (Turok, 2001). The 1997 Housing Act made physical integration a legal requirement in South Africa: higher-density and more compact building, diminished sprawl, more mixed land use planning and less segregation between and within economic and residential areas (Turok, 2001). Housing provision was the primary tool with which the post-apartheid government intended to redress past injustices. However, the Housing Department has received on-going criticism for its disappointing performance in the delivery of adequate housing (Lohnert et al., 2017).

Repealing restrictions on where black and coloured South Africans could live and work led to many people moving to urban areas, with as a result of an even more rapid growth of informal settlements on the urban fringes, often close to townships. Whereas townships generally lack access to urban greenery, the informal settlements are often built on unused peri-urban territories with more easy access to the natural area (Shackleton et al., 2015). Even though now the occupations that used to be reserved for whites were open to all, the number of jobs declined. Unemployment in the coloured and black communities is still high, the populations remain low- People in the coloured and black communities remained and remain largely poorly educated and families still largely live on very low incomes.

3.5 Host organization and regulatory context

This research was conducted for the Environmental Management Department (EMD) of the City of Cape Town. The department is tasked with ensuring Cape Town's long-term environmental sustainability, through working together with other departments. The EMD consists of five branches. The Biodiversity Management Branch is responsible for restoring and conserving the

unique biodiversity of Cape Town. A total of sixteen nature reserves are managed by the department. Besides this, conservation planning, invasive alien species management, skills development and environmental education are undertaken by the branch. The natural coastal environment and ecosystems are managed and conserved by the Coastal Management Branch. The Areas Environment Branch is tasked with environmental and heritage monitoring, procedures and project. Together with communities, the environmental and cultural heritage is maintained and enhanced. This branch also checks the department's compliance with environmental, heritage and outdoor advertising policies. The Environmental Planning and Sustainability Branch helps the City to implement an environmental policy and strategy. This includes resource efficiency management and conservation, climate change policy, environmental reporting, sustainable livelihoods, and the coordination of a natural open space system (City of Cape Town, n.d.-b). The Recreation and Parks department is more directly tasked with developing and managing Cape Town's UGSs.

This research was established as part of the EMD's natural open space system project, also called Biodiversity Network or Metropolitan Open Space System. For this project, the City conducted research into the 'critical biodiversity areas' of Cape Town and priority areas were designated. This resulted in a thorough understanding of the ecological value and importance of Cape Town's various UGSs (Laros, 2007). However, research into the value of UGSs from a human perspective was still to be conducted. This paper contributes to an understanding of this human perspective as an input for the Biodiversity Network objectives of the City of Cape Town.

4. Methodology

This section will thoroughly explain the steps that were taken towards answering the research question. Also, important terms will be explained.

4.1 Research question and sub-question

In order to assess the effect of individual and locational characteristics on people's perceptions, preferences, use frequencies and use motives of UGSs (i.e. UGS attitudes) in the South Peninsula of Cape Town step by step, a set of sub-questions have been drafted:

- What UGS perceptions, preferences, and use frequencies and motives do people in the South Peninsula have?
- What are the individual and locational characteristics of these people?
- What is the relationship between these individual and locational characteristics and people's UGS attitudes?

People's UGS attitudes, individual and real location will be obtained through questionnaires. GIS-analysis will determine people's relative location. The relationship between these characteristics and people's UGS attitudes will ultimately be determined via statistical analysis. These methods will be explained more thoroughly later in this chapter.

4.2 Operationalization

The term UGS has been shortly addressed in the Introduction. There, it was defined as open space situated within city limits that are predominantly covered in vegetation, be it planted deliberately or occurring naturally, indigenous or exotic, left by design or by default. This includes beaches. More simply, an UGS is any urban area that is not covered in an unnatural or man-made surface. UGSs encompass both primary green spaces, such as green belts, nature reserves, river corridors and parks, or ancillary green spaces, for example verges and green island along roads, sport grounds and cemeteries). In the latter category, the greenery is secondary to the key function of the land (Jackson & Davison, 2016; Jim & Chen, 2006). This study only includes UGSs that are either 'public goods' or 'club goods', which means that private green spaces are not included.

All UGSs that are termed as being an UGS by the City of Cape Town will be included in this study. The City of Cape Town distinguishes between 'community parks', 'district parks', 'coastal zones' (from now on 'beaches'), 'Biodiversity Networks and rivers and wetlands' (from now on 'nature reserves'), 'sports grounds and golf courses' (from now on 'sports grounds'), 'greenbelts', 'road reserves and undeveloped vacant land' (from now on 'undeveloped green space'), agriculture areas (since these are not public or club goods, these will be excluded from this study), 'cemeteries and memorial gardens' (from now on 'cemeteries'), 'utilities facilities and servitudes' (excluded, because not public), and natural space associated with schools and institutions (only included when public or club goods.

A community park, according to the City of Cape Town, is "land zoned 'public open space' of a smaller scale which serves the informal recreational needs of the immediate local community or neighbourhood." (City Parks Department, 2015, p. 3). A district park is "land zoned 'public open space'; usually of a large scale which provides a variety of recreational facilities, which serve the needs of several surrounding local communities or suburbs and to which people may be prepared to travel some distance." (City Parks Department, 2015, p. 3) Beaches, in this research, include all types of coastal zones, including rocky coastal zones and tidal pools. Nature reserves are open spaces that are protected in order to protect or conserve important biodiversity (Environmental Resource Management Department, 2010). Sports grounds are defined as areas "suitably zoned, graded and maintained for active recreation purposes, usually fenced with access control, and a parking area, clubhouse/s, and sometimes a small grandstand or pavilion." (Department of Sport Recreation and Amenities, 2015, p. 2). Greenbelts are areas that are purposely undeveloped, often land that is occupied by rivers, streams, natural water courses man-made canals, and storm water detention ponds and the associated green areas or banks surrounding them. Undeveloped green

spaces are all green spaces that are zoned as public open space, but are not otherwise developed. They are usually vacant but may sometime in the future be developed (City Parks, 2004).

The exact meaning of the components of which UGS attitudes consist in this research, 'preferences of importance of UGS functions', 'preferences', and 'use frequencies and motives' are operationalized into great detail in section 4.4.1 Questionnaire design below.

4.3 Choice of research area

It was claimed in section 3.1 Research area that the research area represents Cape Town well. Table 1, generated with the latest census data, shows that this is indeed true, especially for level of education and income. Coloured people are slightly overrepresented in the research area, and black African people are slightly underrepresented. This area is still the most suitable for this research, as it is the only area in Cape Town in which these different groups of people live so close to each other, which is necessary to make the different population groups comparable to each other. This area can therefore be seen as a micro-Cape Town.

Table 1: Comparison Cape Town and research area, % of population, 2011 census data

	Cape Town	Research area
Race		
Black African	38.63	24.19
Coloured	42.39	61.70
White	15.66	10.01
Other	3.31	4.10
Level of education		
No	1.76	2.38
Some primary	8.08	10.50
All primary	4.62	6.70
Some secondary	38.64	42.28
All secondary	30.17	23.99
Higher	16.17	13.72
Other	0.55	0.43
Income		
No	13.71	15.10
R1 - R1600	17.32	16.99
R1601 - R3200	15.99	16.12
R3201 - R6400	14.45	15.71
R6401 - R12800	13.04	13.13
R12801 - R25600	11.85	12.06
R25601 - R51200	8.69	7.59
R51201 - R102400	3.56	2.47
R102401 or more	1.39	0.85
No answer	0.01	0.00

Source: Strategic Development Information and GIS Department, 2012

4.4 Data collection

Quantitative data has been gathered through both online and face-to-face questionnaires. A total of 306 surveys were conducted (170 online and 136 face-to-face). After the surveys, seven face-to-face interviews with experts engaged in UGSs, ranging from a primary school teacher of a so-called eco-school in Lavender Hill to a nature conservation manager of the City of Cape Town, have been conducted to help interpret the survey results.

The research follows some of the principles for evaluating UGSs proposed by Herzele and Wiedeman (2003). The survey takes the citizen as point of departure, not the UGS. Therefore, the survey has been conducted at neutral places, not at UGSs, to include both users and non-users (see section 4.4.3 Locations for surveying). The analysis distinguished between the different functional levels of UGSs, and did not see them as substitutes of one another. The variety of qualities perceived by the users of specific UGSs was assessed, and people's purposes for using certain

UGSs, regardless of the UGS's intended purpose, were considered. Following the principles proposed by R. Coles & Caserio (2001) and by Tyrväinen et al. (2007), the survey inquired into people's perceived positive and negative attributes of the UGSs they visit.

4.4.1 Questionnaire design

The survey served to measure the concepts of perceptions of importance of UGS functions, preferences, and use frequencies and motives.

A first draft of the questionnaire was developed on the basis of the previous studies, conducted in Finland, England, Belgium, Australia, Japan, Pakistan, China and South Africa that were discussed in the Theoretical Framework. Since UGS attitudes largely depend on the local context, the questionnaire was then tailored to the context of Cape Town. Some face-to-face meetings were held with staff members of the EMD of the City of Cape Town and the Cape Town Environmental Education Trust (active in, among other things, promoting engagement with the natural environment of school-age children) to discuss the draft. The draft survey was refined and the updated questionnaires were distributed through email to the participants of the meetings for further feedback. Notes of the meetings and of the online feedback are added in Appendix 1.

Hereafter, the questionnaire was tested by six colleagues. They were asked to measure the time taken to fill out the surveys and to take notes of unclear questions and answer options. A re-updated survey was subsequently tested in the field, at Capricorn Square, one of the locations where the actual surveying would be taking place. Six passers-by were asked to fill out the questionnaire, and they were observed doing so. The survey was found too long and the terminology too difficult. Also, five respondents seemed to have trouble reading. The survey was shortened, the terminology simplified, and the decision made to read the questions to respondents rather than having them fill out the questionnaire themselves. The final version of the questionnaire in English can be found in Appendix 2. It was also translated into Afrikaans.

The survey was divided into six sections. Section 1 concerns people's UGS preferences and consists of one open question asking people to describe, using their imagination, how their perfect UGS would look. Section 2 inquires into people's perceptions of importance of UGS functions, by asking them to rate 25 different functions from very unimportant (=1) to very important (=5). section 3 looked into perceptions of negative functions of UGS by having the respondents rate a list of eight functions from strongly disagree (=1) to strongly agree (=5). In section 2 and 3 there was always an answer option 'I don't know/No answer'. The order of appearance in the survey of the positive and negative functions of UGSs was randomized with Excel. Sections 4 and 5 inquired into people's use frequency and motives. Section 4 did so for people's favourite UGS: its name, how often the respondent visits this space, how long the respondent generally stays, the means of transport to get here (multiple response), for what purposes the space is visited (multiple response), and what positive and negative attributes the space has (multiple response). When the respondent visited another UGS more frequently than his or her favourite one, the same questions were answered in Section 5 about the most frequently visited UGS. Section 6 asked people to rate Cape Town's supply and general state of UGSs from bad (=1) to excellent (=5). In Section 7, twelve questions about respondents' individual characteristics were asked. Respondents were also asked to give their address and the size of their garden (locational factors). If people preferred not to give their exact address, they could also point out an area within which they live on the map included in the questionnaire, or mention the street on which they live (with or without the range of house numbers between which they live). Respondents of the online questionnaire had the option to indicate in which block on the grid that was placed over the map of the research area for that purpose, they live (see Appendix 3). Section 7 also included a question on whether respondents were able to visit UGSs as a child, as this was expected to influence UGS attitudes.

Table 2 shows an overview of the characteristics of the study sample. Because many people do not distinguish between Vrygrond and Capricorn (people that live in Vrygrond say they live in Capricorn and vice versa) and between Steenberg and Retreat, these neighbourhoods have been merged into one category. Also Sheraton Park and Coniston Park have been merged together, as they are small and similar neighbourhoods that lie adjacent to each other.

Table 2: Demographics and socio-economic (individual) characteristics

	N		N		N
Gender		Marital status		Household income	
Male	99	Married	138	No income	14
Female	192	Living together	23	R 0 - 3500	78
Age		Widower/widow	16	R 3501 - 7500	30
15-19	7	Separated/divorced	35	R 7501 - 15 000	28
20-24	19	In a relationship	16	R 15 001 - 30 000	46
25-29	24	Single/never married	60	R 30 001 - 75 000	49
30-34	19	Household size		R 75 001 - 150 000	9
35-39	27	1	27	R 150 001 - 300 000	1
40-44	36	2	74	R 300 001 - 500 000	2
45-49	32	3	43	R 500 001 or more	5
50-54	23	4	53	UGS-visits as a child	
55-59	26	5	46	No	36
60-64	33	6	14	Yes, often	164
65-69	21	7	8	Yes, occasionally	64
70-74	7	8	4	Yes, but not at all often	22
75-79	9	More than 8	10	Garden	
80-84	3	Children		No	81
85+	0	No children	76	Yes, <5m2	62
Highest completed education		1	53	Yes, 5 - 15m2	61
No education	4	2	76	Yes, 15 - 50m2	51
Primary School (Grade 1-7)	26	3	47	Yes, >50m2	33
Secondary Sch.(Grade 8-10)	52	4	21	Nationality	
Secondary Sch. (Grade 11-12)	67	More than 4	14	Non-South African	60
National Diploma	51	Religion		South African	227
Bachelor's Degree	51	Christianity	193	Neighbourhood	
Master's Degree	26	Atheist, agnostic, no religion	64	Lavender Hill	57
Doctorate	10	Islam	20	Seawinds	11
Employment status		Judaism	2	Vrygrond/Capricorn	29
Employed	108	Spiritual	5	Steenberg/Retreat	33
Self-employed	53	Race		Sheraton Park/Coniston Park	8
Studying	14	Choose not to classify	19	Kirstenhof	2
Unemployed	39	Black African	21	Muizenberg	51
Housewife	15	Coloured	136	Lakeside	23
Retired	53	White	115	Marina da Gama	44
Other	5				

4.4.2 GIS-mapping for questionnaire

Four maps have been created with ArcGIS to include in the questionnaire, for people to indicate their residential location (see Appendix 2 for the face-to-face version and Appendix 3 for the online version) and to indicate the UGSs they use (one detailed map of all UGSs within the research area, that was already presented in Figure 8 above, and one map that shows all beaches, district parks and nature reserves in the entire city, see Appendix 4). All spatial information used to assemble these maps was retrieved from the City's Open Data Portal (City of Cape Town, n.d.-a), open to anyone, and the City's internal GIS Server.

For the map to indicate the residential location, a shape file of all streets in Cape Town and a shape file showing the boundaries of the twelve selected neighbourhoods were placed over a layer of a composite aerial photograph dating from February 2015, the most recent aerial photograph available at the City's GIS Server. This photograph made the map more easily readable for everyone. Street names of all street longer than 1.5 centimetres on the map or 300 meters in real life, were included on the map, also to increase readability of the map. Since only people living in the selected neighbourhoods are potential respondents, only streets and street names in these areas are included. The Data Management Tool 'Create Fishnet' was used to create the grid for the map of the online version. The maps of UGSs were created by combining spatial data of the UGSs in Cape Town with aerial photos and street maps.

The ground truth of the detailed maps of the neighbourhood have been checked by driving through every single street of the research area, except for those in Lavender Hill, because of safety reasons, and were updated accordingly.

4.4.3 Locations for surveying

Because of safety reasons, door-to-door surveying or surveying on the streets was not an option. For example, low-income neighbourhood Lavender Hill has recently been suffering from gang related crime and casualties from stray bullets are not uncommon. Moreover, in the wealthier neighbourhoods, residents are hesitant to open the gate for 'strangers'.

The online survey, that was launched a few days before the face-to-face surveying started, was reaching mainly people from the wealthier neighbourhoods of Muizenberg, Lakeside and Marina da Gama. Therefore, survey locations inside the less privileged neighbourhoods were selected. Firstly, potential locations were explored on Google Maps and Google Streetview. A selection of locations was then visited in real life with a City of Cape Town employer who knows the area well, after which two locations were selected, because both attract high numbers of visitors, both are neutral (in the sense that there are no formal UGSs very close by), and both are safe. The selected locations are the gated and guarded shopping area Capricorn Square near Vrygrond and Capricorn, and the guarded lower-end supermarket Shoprite in Steenberg, bordering and attracting also many people from Lavender Hill.

UGSs were not considered as surveying locations, as this would bias the respondent selection towards users of that particular space, while it would also probably bias answers given to the questions on people's use motives of specific UGSs and on their perceptions of importance of UGS functions.

4.4.4 Sampling strategy

Due to the fact that the questionnaire data will be used for regression analysis, and because of the expected heterogeneity of the group, a large sample size was needed. A minimum of 250 was determined together with the EMD of the City of Cape Town. Due to time limits, the choice was made to supplement the face-to-face survey with an online survey.

The online questionnaires were distributed to anyone that would likely be living in the area or know people that live in the area. Via email, it was sent to all companies, NGOs, restaurants and bars, governmental institutions such as libraries and ward offices, schools, and personal contacts in the selected neighbourhoods. By asking all contacted people to forward the survey to their own contacts, the questionnaire digitally 'snowballed' through the neighbourhoods. It was also distributed via Facebook-groups with users that were likely living in the area (for example, 'Muizenberg Noticeboard' or 'Steenberg and Retreat news and updates'). Also here, people were asked to 'share' or forward the questionnaire.

To limit personal judgement as to whom to approach for the face-to-face surveys, every third person exiting the supermarket was asked to participate in the questionnaire. People were first asked where they lived. Only respondents within the research area, or within a buffer zone of 200 meters outside the research area were included.

After about 100 questionnaires, there was still a very low response from people from Lavender Hill. The New World Foundation, a non-profit organisation located and active in Lavender Hill, made available five members of its so-called 'Street and Court Committees' that know the streets and the people of Lavender Hill well to gather a number of surveys. After two meetings in which the committees were trained to all conduct the surveys in the same manner, they collected a total of 47 surveys among their personal contacts in the area.

Eventually, 306 questionnaires were gathered. As seen in Table 2, Kirstenhof and Sheraton and Coniston Park are highly underrepresented, which formed restrictions for the eventual statistical analyses. Another constraint is linked to the multiple-response questions on positive and negative attributes of UGSs and on purposes of visiting UGSs. The results have proven to be influenced by the data collection via two separate ways, since the two methods attracted respondents with different socio-economic profiles and online respondents on average ticked

much more boxes than face-to-face respondents. This limitation will be discussed in more detail in section 7.1 Limitations.

Table 3 shows a comparison between the sample and the actual population in the research area (based on 2011 census data). The division of income groups that was used in this research differed from the division the census data makes. Here, approximations are given.

Table 3: Comparison actual population vs. research sample

	Actual	Research sample
Race		
Black African	24.19	7.22
Coloured	61.70	46.74
White	10.01	39.52
Other/choose not to classify	4.10	6.53
Level of education		
No	2.38	1.39
Some primary	10.50	n.d.
All primary	6.70	9.06
Some secondary	42.28	18.12
All secondary	23.99	23.34
Higher	13.72	48.08
Other	0.43	0
Employment status		
Employed	84.31	86.41
Unemployed	15.69	13.59
Income		
No	15.10	5.34
R1 - R1600	16.99	~52
R1601 - R3200	16.12	~17
R3201 - R6400	15.71	~15
R6401 - R12800	13.13	~6
R12801 - R25600	12.06	~2
R25601 - R51200	7.59	~1
R51201 - R102400	2.47	~1
R102401 or more	0.85	~1
No answer	0.00	0

4.4.5 Qualitative data

Seven expert interviews have been conducted to discuss the results of the surveys, which has helped interpreting those. Some interviews have been conducted with work contacts, others were found via other people's contacts, especially Alice Ashwell's. As a former environmental educator and current self-proclaimed 'nature experience facilitator', she has an extensive professional network. The respondents are shortly introduced in Table 4. Peter van Heerden was interviewed, but the interview was not useful since Peter only had technical knowledge of urban planning and was therefore unable to help interpret social issues. The six other interviews were all literally transcribed and coded with NVivo 2 into the same subtopics in which the results section is divided. The transcripts can be found in

Table 4: List of interviewees

Name	Category	Organization	Function
Ivan Jones	NGO/Religious	Community Pride	Founder
Anthony Roberts	NGO/education	CTEET	Chief Executive Officer
Louise Matschke	NGO/Education	CTEET	Education & Training Manager
Dalton Gibbs	Government/City	CCT	Nature Conservation
Fadiah Abbas	Education	Levana Primary School	Teacher and Natural Scientist
Stephen Granger	Government/City	CCT	Manager Env. Planning and Sustainability, EMD
Peter van Heerden	*Government/City*	*CCT*	*Planning Coordinator*

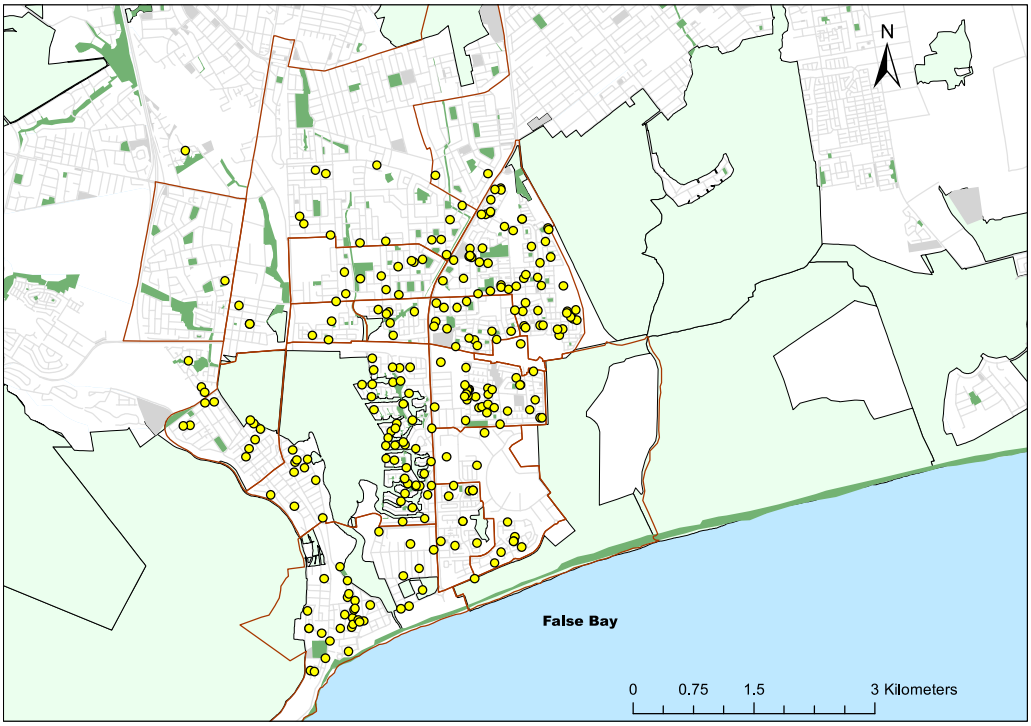
4.5 Data analysis

The quantitative data has been curated in Microsoft Excel and then analysed using ArcMap 10 (ArcGIS) and STATA 13.0. The qualitative interview data has been analysed using NVivo 2. ArcGIS has also been used to generate the 'relative' locational indicators, such as distance to the favourite, most frequently visited and nearest UGSs and area of various UGSs within reach. The next sections will explain how this was done.

4.5.1 GIS-analysis

One important predictor of people's UGS attitudes is expected to be distance from the residential location to the nearest, favourite and most frequently visited green space. Using the home addresses that respondents gave in the survey and converting them into coordinates using Google Maps, a shape file was created with one point for every respondent's residential location. When respondents preferred not to give their precise address, but only their street name, a range of house numbers between which they live, or block on the grid, ArcGIS was asked to create a random point within the range the respondent indicated, using the Data Management tool 'Create Random Points'. These points were added to the layer of respondent locations. No random points were created for respondents that indicated no location at all. See Figure 10 for all residential locations of the respondents. Seventeen respondents were included in the research that fall just outside the research area, but within the buffer zone.

Figure 10: Residential locations of respondents



Spatial data: City of Cape Town (n.d.-a) and Nina van Rijn; Map: Nina van Rijn

To calculate the additional indicators, layers provided by the City of Cape Town were added to the map of respondents, one layer for each type of UGS (Community Park, District Park, Beach, Greenbelt, Undeveloped Green Space, Sport field). The layer for Nature Reserves was manually developed using the City layer for 'Biodiversity Network'. To be able to calculate travel distances, coordinates were added to each UGS for the location of its entrance using the Data Management tool 'Add XY Coordinates'. For all UGSs, this was quite straightforward, except for Table Mountain National Park, as this green space is very big and there are dozens of access points. Most people indicated which section they visited (for example, Muizenberg Mountains,

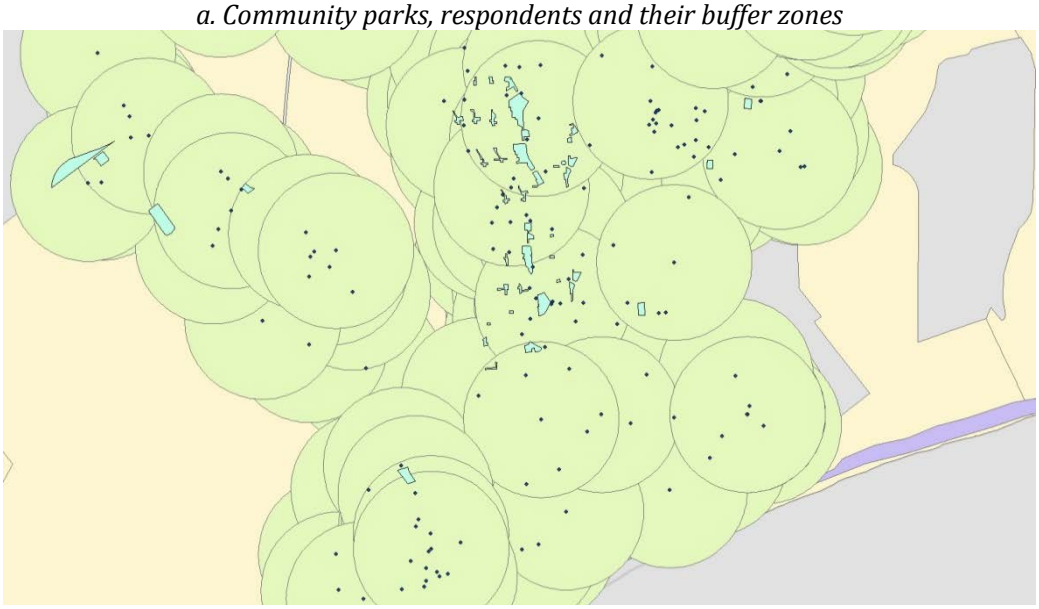
Silvermine Dam Area, or Lion's Head). In this case, there was no problem with determining the entrance location. However, when people did not indicate a section of Table Mountain, the coordinates of the lower cable station were used, as this is the place where most people access the mountain: the cable car to the top of the mountain departs here, and it is the starting point of the most popular hikes. Now, travel distances from every respondent to his or her nearest, favourite and most frequently visited green space could be calculated. The former using the 'Near' option in the Analysis Toolset that determines which UGS feature is nearest and how far it is from the respective respondent as the crow flies, the latter by generating an OD Cost Matrix using the Network Analysis Toolset. Network Analysis allows for the usage of a road network to calculate travel distances. The road layer was provided by the City of Cape Town. This tool was not used for respondents' nearest UGS, since they do not actually travel there. Since no direct comparisons between the travel distances of the nearest and the favourite and most frequently visited UGS were drawn, it was not necessary to generate the time-consuming OD Cost Matrix for the nearest UGS.

The area of various UGSs within people's reach was calculated following Herzele & Wiedeman's (2003) advice to assess this for different types of UGSs separately, since UGSs at different functional levels are no substitutes for each other. Three Buffer commands (Geoprocessing Tool) were performed, drawing radiuses around respondents' residential area of 400 meters, 1600 meters and 3200 meters, to calculate the area of respectively neighbourhood parks, district parks, and nature reserves within these radiuses (Herzele & Wiedeman, 2003). Beaches were not mentioned by Herzele & Wiedeman (2003), but because of their importance in Cape Tonian's lives, they were added (on the same functional level as Nature Reserves, thus within 3200 meters of one's residential location). Cemeteries and undeveloped UGSs were not taken into account, because it can be argued (and the data showed) that these are generally undesirable green spaces and having a cemetery or undeveloped green space within reach, is not likely to, for example, influence frequency of UGS use. Sports fields were not taken into account because these are not public but club goods: they are excludable and are therefore generally not in people' reach who are no club members, even if they are within reach in terms of distance. ArcGIS was used to divide all included UGSs into small splinters that would fit all buffer zones, using the 'Identity' Analysis Tool, generating a new shape file in which every splinter is a separate polygon. The size of every splinter was calculated using the Calculate Geometry tool. The size of the splinters was then summed for every individual buffer zone using the Summary Statistics tool, with the newly created shape file as input and all buffer zones as 'cases' for which to sum the splinter areas. Figure 11 shows this process: on the left the community parks, respondents and their 400 meter buffer zones can be seen (with overlapping buffer zones); on the right all individual buffer zones and the splintered community parks can be seen, that then were added up for every buffer zone.

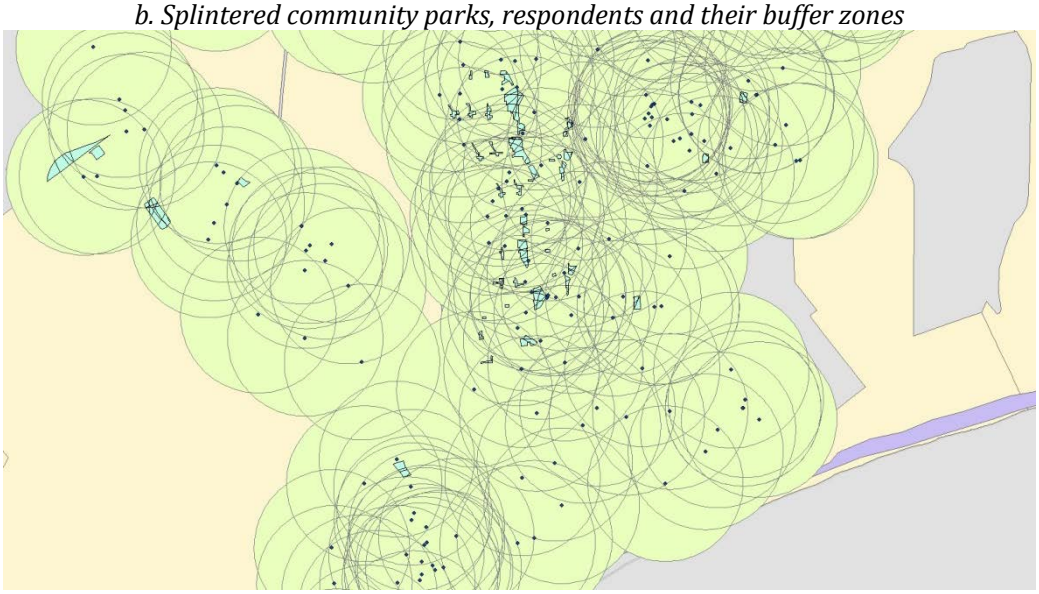
Some additional predictors were also created using ArcGIS. The size of the nearest, favourite and most frequently visited UGS were determined, using the Calculate Geometry tool. By adding City of Cape Town layers depicting household and population numbers and densities in all neighbourhoods, and by linking these figures to every individual respondent by performing a Spatial Join (attaching the data of the separate neighbourhood-polygons to each respondent-point that falls inside it), additional predictors were created for household and population density in every respondent's living area.

Figure 11: ArcGIS-process of calculating UGSs within reach

a. Community parks, respondents and their buffer zones



b. Splintered community parks, respondents and their buffer zones



4.5.2 Statistical analysis

The survey-data and additional spatial data of the City of Cape Town and GIS-generated indicators were analysed using STATA 13.0.

Perceptions of importance of UGS functions

It is expected that the 25 functions that respondents were asked to rate according to importance are not entirely uncorrelated, but linearly related to a smaller number of latent or unobserved 'factors'. In order to uncover these unobserved factors, factor analysis was conducted. It is hypothesized that five underlying factors that can be described as cultural, environmental, economic, health and wellbeing, and social and educational play a role in people's perceptions of importance of UGS functions. The factor analysis will prove or disprove this. Following Kaiser's eigenvalue-criterion, only factors with an eigenvalue greater than 1.0 are seen as meaningful (Larsen & Warne, 2010). This process both uncovers underlying factors influencing perceptions of

importance, and reduces the number of variables in later regression analyses from 25 to a smaller number suggested by the factor analysis.

After some summary statistics were generated, multiple ordered logistic regression analyses were conducted in order to identify whether and which individual and locational factors are significant in predicting people's perceptions of importance of UGS attitudes. This method has been chosen since the dependent variable is ordinal (respondents rated UGS functions from very unimportant to very important). Five analyses were conducted, one for each factor. Variables were included in such a way that the correlation between them did not exceed 0.5. The so-called odds ratio was published, which shows the odds of one group choosing the specific group as most important compared to the base category. For example, if the odds ratio for 'environment' of females is 2.5, the odds of women highly appreciating this category is 2.5 times higher than the odds of men doing so. If the odds ratio would be below 1, then the odds for women are lower than for men. In logistic regression analysis, it is not possible to show standardized coefficient. This means it is not possible to conclude which predictors have larger effect on the dependent variable than other predictors.

Use preferences: favourite and most frequently visited UGS

For every favourite and most frequently visited UGS, it was determined which type of UGS it is: community park, district park, nature reserve, beach, sport ground, greenbelt, undeveloped green space or cemetery. The latter was never mentioned as favourite or most frequently visited UGS and was thus left out of the analysis. First, some summary statistics were developed. A full list of the names and frequencies of the favourite and most frequently visited UGS is added in Appendix 5 and Appendix 6.

In order to determine which individual and locational factors influence people's UGS preferences in terms of their favourite and most frequently visited UGS, a set of multinominal logistic regression analyses were performed. This is the appropriate regression method when the dependent variable is nominal, unordered and has more than two possible outcomes. 'Community park' was taken as the base category. Multinominal logistic regression analysis breaks down the dependent variables (favourite UGS and most frequently visited UGS) according to the six UGS types and performs separate analysis predicting the probability of people choosing any of the other UGS types as favourite or most frequently visited compared to the reference category 'community park'. This probability is reported as the so-called relative risk ratio. With a relatively small sample size, this method does not allow for large models.

Use preferences: positive and negative attributes

In order to analyse positive and negative attributes of people's favourite and most frequently visited UGSs, the data that was recorded as polytomous variables was converted into 98 dummy variables, one for each positive attribute (25 in total) and one for each negative attribute (24 in total) for both the favourite UGS and the most frequently visited one.

First, some descriptive statistics are generated. Because the goal is to uncover which individual and locational characteristics influence people's ideas of the positive and negative attributes of the UGSs they visit, some analyses of variance (ANOVA) have been be conducted. This revealed whether there are statistically significant differences between the views of different groups of people. The underlying regression analysis is reported to show whether belonging to that group increases or decreases (positive or negative coefficient) the chance of assigning the given attribute (for example 'valuable nature site') to the favourite and/or most frequently visited UGS. In these models, the dependent variables are the individual UGS attributes, while individual and locational characteristics are independent variables.

Since the dependent variable is a dummy variable in which 'no' equals 0 and 'yes' equals 1, a positive coefficient means that the group in question is more likely to ascribe the attribute in question to their favourite or most frequently visited UGS, and negative means less likely.

UGS visit frequencies

To be able to uncover an expected distance-decay effect on UGS visits, new categorical indicators for distance to the favourite, most frequently visited and nearest UGS were created from the original distances calculated in ArcGIS. For each indicator, four categories were created based on the 25 per cent percentiles of the original indicators. Thus, every category covers a range in kilometres to the UGS such that 25 per cent of the respondents fall within it.

This was followed by a set of logistic regression analyses to test the odds of visiting UGSs at least weekly. For this, a dummy variable was created that shows whether people visit UGSs less than weekly (=0) or at least weekly (=1). Different models including locational and individual indicators were developed, all tested for multicollinearity and Pearson's goodness-of-fit. The three models published in this study all show a good fit of the data to the models.

Use motives

In order to determine people's motives for use, the data that was recorded as polytomous variables was converted into 58 dummy variables, one for each 'purpose of visit' (29 in total) for both the favourite UGS and the most frequently visited one.

Besides generating some descriptive statistics, a set of ANOVA-analyses has been conducted in order to identify whether the difference between groups of people in their reasons for visiting UGSs is significant. Similar to the ANOVA-analyses that were conducted for positive and negative attributes of UGSs, the underlying regression analysis is reported to show whether belonging to that group increases or decreases (positive or negative coefficient) the chance of visiting UGSs for the given purpose.

5. Results

This chapter discusses the results of the surveys and the subsequent GIS-analyses and statistical analyses. The results will be interpreted on the basis of the expert-interviews that were conducted.

5.1 Perceptions of importance of UGS functions

Five factors with an eigenvalue greater than 1.0 were extracted in the factor analysis, using varimax rotation. The composition of the factors was determined by involving all UGS functions with a factor loading of greater than .5, which means that the following UGS functions were dropped: 'promotes health and wellbeing', 'encourages and offers space for outdoor physical activity', 'allows learning about nature and environment' and 'increase property value'. STATA was then asked to create scores for these five factor, basically summarizing 25 UGS functions into five indexes. Interpreting the factor loadings, it was seen that, for example, the functions 'provides area for resting', 'improves community image', 'provides refuge from a stressful environment', et cetera (see Table 5) are associated with factor 1. According to the common characteristics of the variables under each factors, the factors were named the following: inner peace and external image, economics and prosperity, environment, culture, and family and socializing. All five factors and the UGS functions categorized in every factor can be found in Table 5.

The alpha coefficient for reliability of the entire scale is .836, considerably higher than both the absolute minimum of .5 and the widely used and more reliable .7 threshold, indicating a reliable test scale. Separate reliability tests have been conducted for each factor. All factors pass the test, except for factor 'culture' with a coefficient of .470. However, since dropping factor 'culture' substantially would decrease the reliability of the entire test scale to .779, it is retained.

The mean score of the functions categorized in each factor forms the new value of these five new indexed variables, and can also be found in Table 5. With a mean score of 4.42 on a scale of 1-5, the factor environment scores the highest (thus, people scored the five UGS functions under this factor highest), very closely followed by internal peace and external image. With an average score of only .26 lower, economics and prosperity follows. In terms of explained variance in people's perceptions of importance of UGS functions, these three factors score very similarly. Culture scores considerably lower in terms of importance. The average score of its five UGS functions reaches only 3.65.

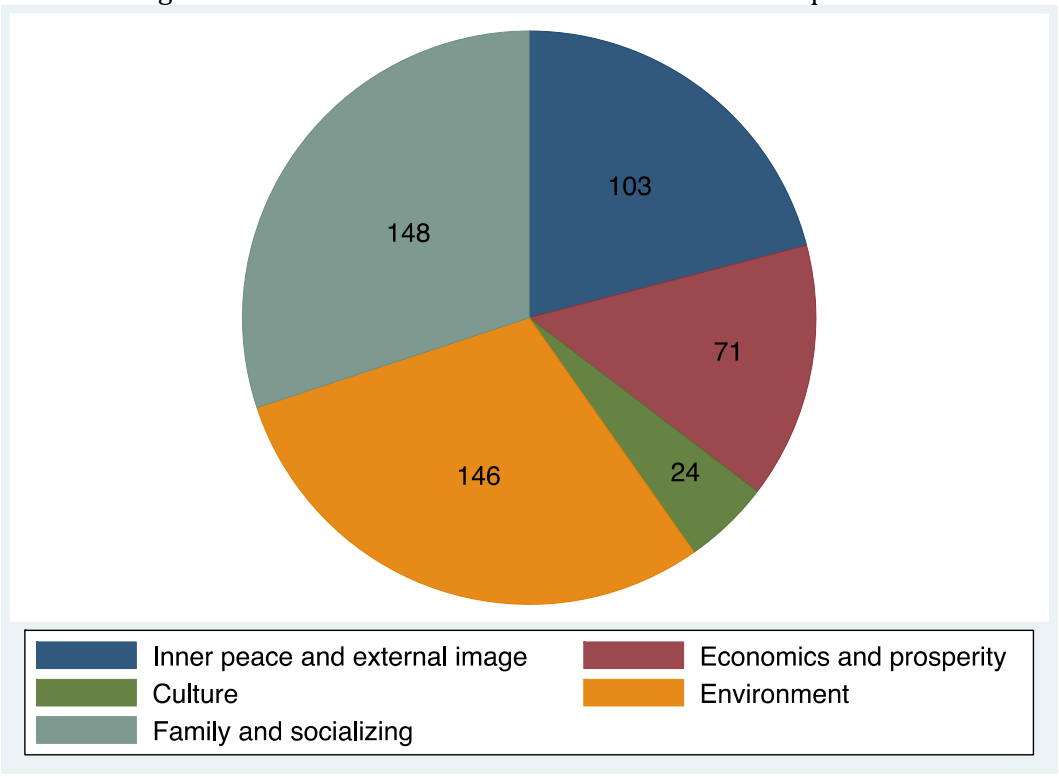
The average values in Table 5 show that 'makes the area more beautiful' is seen as the most important function of UGSs, followed by 'provides area for children to play', 'provides environmental benefits' and 'provides refuge from a stressful environment'. 'Allows practice of religion and tradition', 'attracts business and provides economic benefits', and 'has symbolic identity' are seen as least important.

Figure 12 shows by how many respondents each factor was indicated as most important based on their mean scores. When the mean score of more than one factor was highest for any respondent, all were counted as 'most important'. Therefore, the number of responses is somewhat higher than the number of respondents. Family and socializing, and environment are most often rated as most important, followed by inner peace and external image, while culture ranks lowest, and economics and prosperity second lowest.

Table 5: Importance of UGS functions using factor analysis

	Mean score	Factor load	Variance %	Cornbach's a
Factor 1: Internal peace and external image	4.41		13.92	0.781
Provides area for resting and passing time	4.19	0.651		
Improves the community image	4.16	0.627		
Provides refuge from stressful environment	4.27	0.694		
Makes the area more beautiful	4.53	0.762		
Offers shade and cooling	4.22	0.572		
Factor 2: Economics and prosperity	4.15		12.96	0.771
Increases safety due to more "eyes on the street"	4.19	0.589		
Provides jobs	4.05	0.739		
Space for finding and growing food and flowers	4.05	0.656		
Attracts tourism	3.78	0.548		
Reduces noise and light pollution	4.04	0.518		
Factor 3: Environment	4.42		11.37	0.702
Provides animal and plant habitat and conservation	4.31	0.727		
Prevents soil erosion	4.18	0.649		
Provides environmental benefits	4.33	0.777		
Controls, retains and filters rainwater	4.18	0.623		
Factor 4: Culture	3.64		11.31	0.748
Allows practice of religion and traditions	3.19	0.679		
Has symbolic identity	3.35	0.718		
Attracts business and provides economic benefits	3.27	0.574		
Provides area to meet new people	3.67	0.560		
Provides space for festivities and events	3.76	0.620		
Factor 5: Family and socializing	*4.35*		*7.97*	*0.470*
Provides area for children to play	*4.52*	*0.771*		
Provides area to meet up with friends and family	*4.04*	*0.633*		
			57.53	0.836

Figure 12: Factors of UGS functions chosen as most important



There is large variation between different groups of people in terms of their choice of most important UGS functions. Figure 13 on page 33 shows for some characteristics how often the factors were chosen as most important based on their mean scores. The figures that show the clearest patterns or differences between groups of people are presented here, while the results for all indicators can be found in Appendix 7.

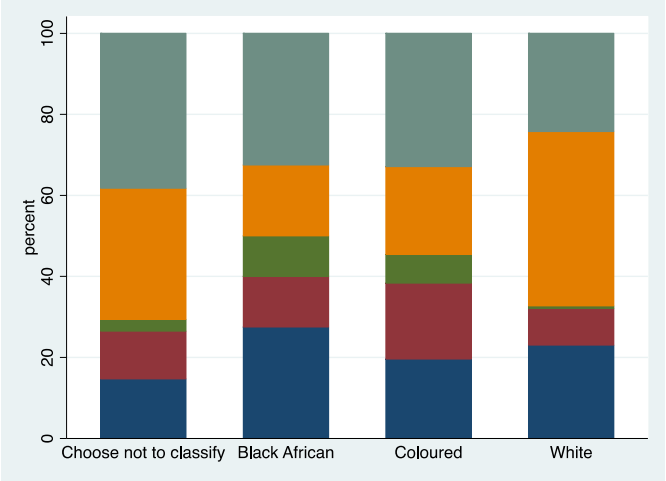
White people overwhelmingly choose 'environment' as most important UGS function, while for black African and coloured people, family and socializing seem more important. During the expert interviews, it was said that this is because in Cape Town, race is still largely connected to where one lives, which was also discussed in the Research context. Indeed, 'family and socializing' is much more often chosen in the black African and coloured communities than in the white communities. The reason for this, is that those living in non-white communities have less likely access to a private garden, either because people do not have a backyard as in Lavender Hill, Seawinds and Vrygrond/Capricorn, or because it is used for yard shacks. These people therefore rely on public green to meet with friends and family and to relax, whereas those living in white communities can use their own back yard (D. Gibbs, personal communication, June 20, 2017; F. Abbas, personal communication, June 22, 2017; I. Jones, personal communication, June 20, 2017;). This interpretation is supported by the fact that indeed, of all black African respondents, over seventy per cent has no private garden, whereas for white respondents this is less than ten per cent. Also Figure 13d and Figure 13e support this interpretation. I. Jones (personal communication, June 20, 2017) and S. Granger (personal communication, June 21, 2017) mention that black African and coloured people are fulfilling needs lower on Maslow's hierarchy, namely 'love and belonging', whereas white people are enabled to also focus on higher needs such as self-actualisation. When one is never exposed to the environmental benefits of UGSs, it is difficult to value them (L. Matschke, personal communication, June 20, 2017; S. Granger, personal communication, June 21, 2017).

People with many children find family and socializing important, mainly at the expense of environment. This is unsurprising, as one of the two functions under family and socializing is 'provides area for children to play'. The higher educated people are, the less likely they find culture and economics and prosperity most important, and the more likely they find environment most important. Those visiting UGSs less than once a week rate family and socializing most often as most important, while for those visiting UGSs more than once a week this is environment, followed by inner peace and tranquillity. This is likely because people with a lower income, or from non-white neighbourhoods, are less likely to visit UGSs once a week, as will be shown later in section 5.3.1 Visit frequencies, and it is exactly these people who find family and socializing most important, as discussed above.

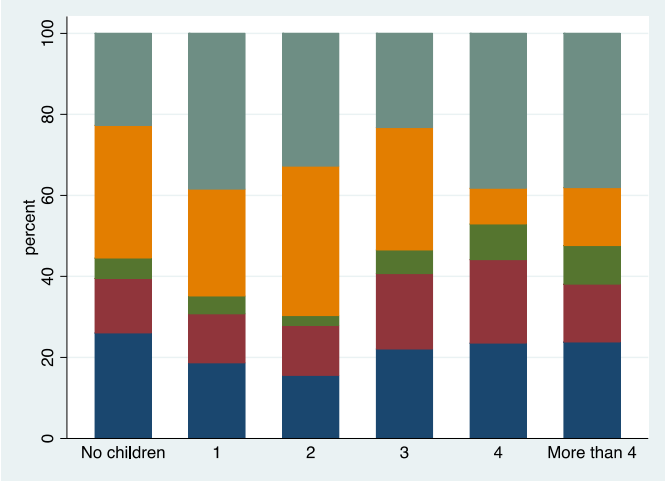
In order to determine which of these, and other socio-economic, locational (and potentially also visit-behaviour) indicators are truly significant in explaining the variance in perceptions of the importance of UGS functions, a set of ordered logistic regression analyses was performed. The five factors were used as dependent variables and all individual and locational indicators, and indicators on visit behaviour, as independent variables. The models have been checked for multicollinearity and all five models pass the chi-squared test with 'family and socializing' showing the highest p-value at .0023, showing that even the least reliable model is extremely reliable. Indicators that show p-values below .05 will be discussed now, while the tabulated output of these ordered logistic regression analyses can be found in Appendix 8. It is important to note that the figures showed the factors that respondents chose as most important (for example, culture or economics and prosperity), whereas the regression analyses use the average score (a score between 1 and 5; respectively between very unimportant and very important). Therefore, it could occur that, for example, even though more coloured than white people choose economics and prosperity as the most important UGS factor, their chances of giving it a high score are lower than for white people. Put differently, it means that even though white people likely rate economics and prosperity *higher* than coloured people do, they less often rate it as *most important* UGS factor.

Figure 13: Most important factor, based on mean rating of UGS functions categorized in factor

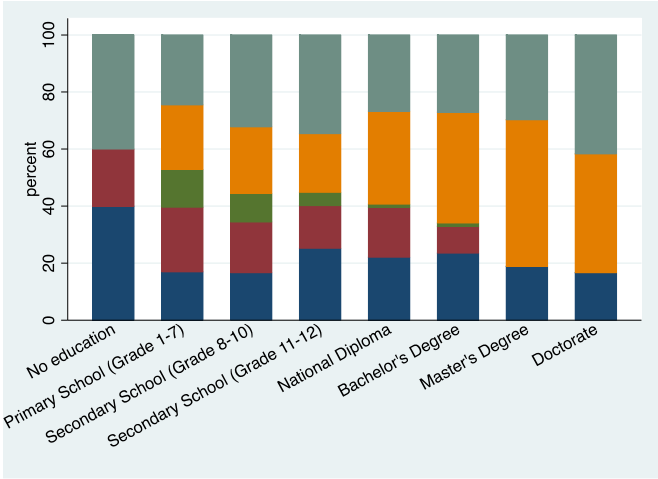
a. Race



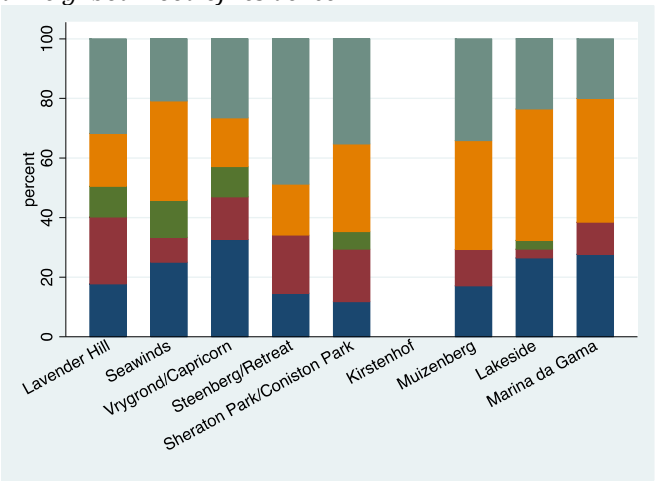
b. Number of children



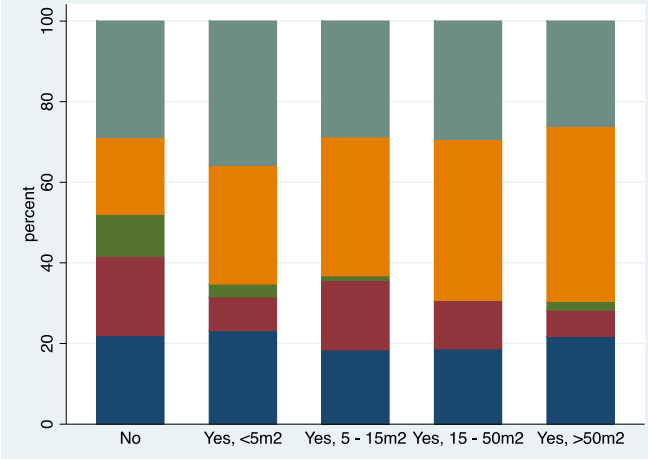
c. Education



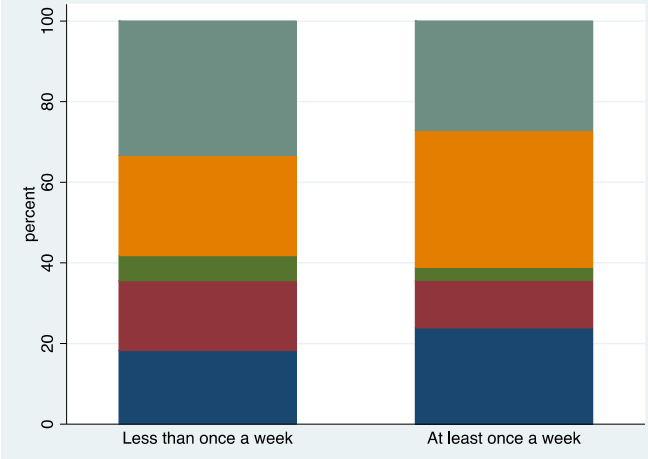
d. Neighbourhood of residence



e. Garden



f. Total UGS visits



Firstly, the effects of individual factors on people's perceptions of importance of UGS functions will be discussed. Women are significantly more likely to highly appreciate environment. Both black African and coloured people are significantly more likely to value culture higher, compared to white people. According to L. Matschke (personal communication, 20 June, 2017), this is because black African and coloured people are more likely historically and symbolically attached to certain UGSs. An example of this is found in the Khoisan (South African natives) legend that Prinsesvlei filled with the tears flowing down through Prinseskasteelrivier from the Prinseskasteel (Princess castle), a cave where the Khoisan princess was said to live. This legend is very meaningful for many Cape Tonians. Also, black African and coloured people are more likely to use UGSs for religious reasons, such as baptisms in the ocean off Muizenberg Beach (L. Matschke personal communication, 20 June, 2017).

Education also appears to matter: having a bachelor's degree, master's degree or doctorate significantly reduces the chance of highly valuing economics and prosperity and culture when compared to having no education. An interpretation of this could be that, thinking again of Maslow's hierarchy of needs discussed in the theoretical framework, those with no education more likely struggle to fulfil their basic needs and are therefore more focussed on the economic advantages of UGSs than highly educated people (S. Granger, personal communication, June 21, 2017). Retired people are less likely to appreciate inner peace and external image, economics and prosperity or environment than employed people. Married people have significantly higher odds of highly valuing economics and prosperity and culture compared to single people. Spiritual people have a staggering 27 times higher odds of highly rating inner peace and external balance compared to people with no religion. The odds of highly rating environment increase with age. Having had the opportunity to visit UGSs as a child significantly decreases the likelihood of highly valuing inner peace and external image, economics and prosperity and culture. Nationality, household income, and number of people in the household are no good predictors of people's perceptions of importance of UGS functions.

In terms of people's visit behaviour, there is a positive relation between how often people visit their favourite UGS and the chances of them highly appreciating inner peace and external image and economics and economics prosperity functions. The larger the distance to this space, the higher chances of appreciating economics and prosperity and environment. The latter could have to do with the fact that people tend to travel further to visit nature reserves, and those visiting nature reserves are more likely to appreciate environmental functions. The larger the distance to the most frequently visited UGS, the lower the chance of highly appreciating environment. How often the most frequently visited UGS is visited, does not significantly affect perceptions.

Living in Vrygrond/Capricorn decreased the likelihood economics and prosperity and culture are highly valued, compared to living in Lavender Hill. Residents of Seawinds have significant higher odds to highly value inner peace and external image and environment than people from Lavender Hill. Living in Marina da Gama makes appreciating inner peace and external balance less likely. People with their own garden more likely appreciate inner peace and external image, economics and prosperity, environment and family and socializing functions. The chance of highly appreciating inner peace and external image, economics and prosperity, environment and culture is lower with an increasing area of community parks and nature reserves within reach.

5.2 UGS preferences

5.2.1 Desired UGS

A very simple word count analysis using NVivo has been conducted on the one qualitative question in the survey, on people's 'perfect UGS'. It has been checked whether these words were not used in combination with a negative term as 'no' or 'without'. For example, one respondent mentioned: "Safe, better to have no trees because then it becomes dangerous - hiding places". In this case, one point was deducted for the word 'trees' in Table 6, in order for the table to show the word count of positive features respondents envision in their perfect UGS. Similar words were not distinguished between (thus area and areas was regarded as the same word).

Table 6: Word count perfect UGS

Word	Count	Similar Words
trees	74	trees
areas	74	area, areas
spaces	68	space, spaces
green	57	green
plants	51	plant, planted, plants
play	46	play, playing
children	43	children, childrens
safe	43	safe, safely
water	42	water, watering
grassed	39	grass, grassed
parks	36	park, parks
indigenous	32	indigeneous, indigenous
shade	29	shade, shaded
place	29	place, placed, places
benches	29	bench, benches

5.2.2 Favourite and most frequently visited UGS

The ten most often given answers to the question on people's favourite and most frequently visited UGSs are presented in Table 7 and Table 8, together with some descriptive statistic. The median travel distance is given from the location of residence of only the respondents that mentioned this UGS as their favourite and most frequently visited respectively. Also the median and average number of visits per year is only given for those that indicated the UGSs as favourite and most frequently visited respectively. The UGSs that occur in the tables of both favourite and most frequently visited UGSs are highlighted so they can easily be compared.

The choices of favourite UGSs are much more spread out than the most frequently visited UGSs. For example, Muizenberg beach is the favourite UGS for less than 15 per cent of the people, while it is the most frequently visited UGS of a fourth on the people. This is logical: one can choose any favourite UGS, there are no limits. Whereas people are restricted in their choice of most frequently visited UGS by, for example, accessibility in terms of distance and entrance fee. People tend to travel further for their favourite UGS than for their most frequently visited one, again because there are no limits to the choice of favourite UGS. The average travel distance for all respondents to their favourite UGS is 12.77 kilometres and the median 10.77 kilometres, whereas on average people only travel 8.91 kilometres to their most frequently visited UGS with a median of 5.11 kilometres.

The difference between the number of visits per green spaces is large. The average person (thus the median) indicating the close by Zandvlei Estuary as their most frequently visited UGS (N = 8) visits it every day, while the average yearly visits is at 309. The average person that says he or she visits Kirstenbosch Gardens most often (N = 8), which is averagely approximately nine kilometres further away than Zandvlei Estuary, only does so six times a year, while the average yearly visits is eight. For those that have Park Island as their favourite UGS (N = 13), the median yearly visits are 65, while the average yearly visits are 165. For the average person, Park Island is very close by. The Company's Gardens, that are over 22 kilometres away for the average person, is visited on average nine times a year by those for whom it is their favourite UGS (N = 17).

Table 7: List of favourite UGSs

Favourite UGS	Type of UGS	Frequency	Per cent	Median travel distance	Median visits	Average visits
1. Muizenberg Beach	Beach	38	14.56	3.63	52	95
2. Kirstenbosch Gardens	Nature reserve	25	9.58	14.02	3	12
3. Green Point Park	District park	18	6.90	27.50	7	13
4. Zandvlei District Park	District park	18	6.90	4.30	104	150
5. The Company's Gardens	District park	17	6.51	22.39	8	9
6. Table Mountain - SDA	Nature reserve	15	5.75	10.39	15	34
7. Park Island CP	Community park	13	4.98	0.96	65	165
8. Table Mountain	Nature reserve	12	4.60	26.56	12	21
9. Wynberg Park	District park	10	3.83	11.22	12	19
10. Tokai Forest	Nature reserve	9	3.45	7.18	24	75
			67.06			

*SDA=Silvermine Dam Area; CP=Community Park

Table 8: List of most frequently visited UGS

Most frequently visited	Type of UGS	Frequency	Per cent	Median travel distance	Median visits	Average visits
1. Muizenberg Beach	Beach	61	25.00	2.65	78	109
2. Zandvlei District Park	District park	32	13.11	4.30	117	158
3. Park Island CP	Community park	18	7.38	0.94	358	215
4. Green Point Park	District park	12	4.92	27.43	12	21
5. The Company's Gardens	District park	10	4.10	22.54	12	17
6. St James	Beach	9	3.69	6.22	41	105
7. Kirstenbosch Gardens	Nature reserve	8	3.28	13.07	6	8
8. Zandvlei Estuary	District park	8	3.28	3.63	365	309
9. Fish Hoek	Beach	7	2.87	9.94	24	45
10. Tokai Forest	Nature reserve	7	2.87	6.72	52	133
			70.50			

*CP=Community Park

Table 9 shows how often certain types of UGSs are chosen as favourite and as most frequently visited. Nature reserves are most often chosen as favourite green spaces, whereas the beach is the most often the most frequently visited green space. If people choose to visit another UGS more often than their favourite one, this is also predominantly the beach. It varies with changing individual and locational characteristics and for which reasons people visit UGSs, which (type of) UGS is chosen as favourite and as most frequently visited. Which factors matter, will be explored in the remainder of this section.

Table 9: Types of UGS as favourite and most frequently visited, in % of total choices

	Favourite	Most freq. visited	Most freq. visited (if not same as fav.)
Beach	26.36	**38.93**	**46.74**
Community Park	8.53	11.89	15.22
District Park	28.68	28.28	21.74
Nature reserve	**34.50**	18.85	13.04
Sport Ground	0.39	0.41	1.09
Undeveloped	0.00	0.41	1.09
Greenbelt	1.55	1.23	1.09
Total	100	100	100

Figure 14 gives some examples for the relation between potential predictors and the type of UGS that was chosen as favourite and as most frequently visited. The predictors that show the clearest patterns are presented (number of children, UGS visits as a child and level of education), while the figures for all other indicators can be found in Appendix 9. The figures do not show how often the types of UGS are truly visited, but how often they are relatively mentioned as favourite and most

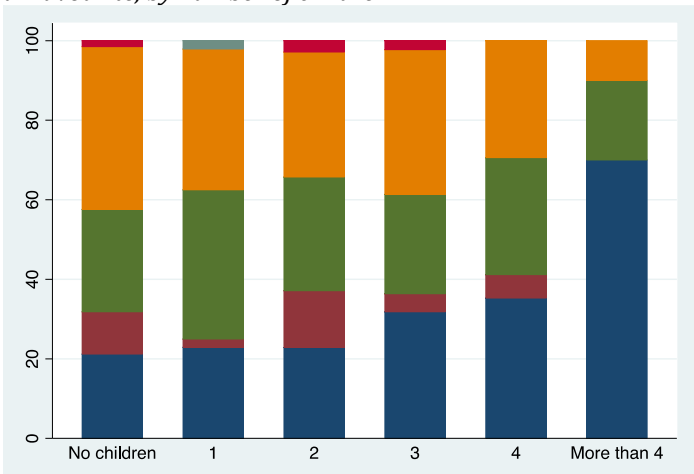
frequently visited UGS. (Frequency of use will be discussed in section 5.3.1 Visit frequencies). Naturally, also the visiting purpose strongly relates to the type of UGS that is chosen: people do not visit Tokai Forest if they want to surf. This will also shortly be explored here, but more thoroughly in section 5.4.1 Purposes of UGS visits.

The figure shows that with an increasing number of children, nature reserves are less often mentioned as favourite and most frequently visited UGSs, whereas the beach is more often mentioned. A likely explanation for this is that Muizenberg Beach, the most popular beach among the respondents, has a playground for children, and because the beach is perceived as more suitable for children to play altogether than nature reserves. Indeed, for over 45 per cent of the people who visit their most frequently visited UGS to 'let the children play outside' this UGS is a beach, whereas for less than 15 per cent this is a nature reserve.

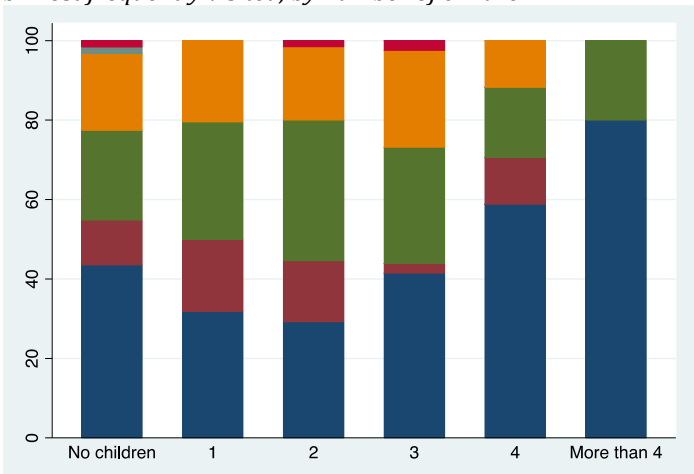
All 36 respondents that indicated to never have had the opportunity to visit UGSs as a child reported a beach or district park as favourite and most frequently visited UGSs, whereas those who were exposed to UGSs as a child have more varied favourite and frequently visited UGSs. Higher educated people more often mentioned nature reserves as favourite, which logically follows the finding in the section above that with rising educational level, environment is more often mentioned as most important UGS factor. In line with this, it is also found that the higher the educational level, the more often respondents indicated to visit their favourite UGS for the following nature-related purposes: enjoy natural beauty and views; see wildlife, birds and plants; feel connected to nature, and; learn about nature and environment. For example, of all people who visit their favourite UGS to feel connected to nature, over 25 per cent has a bachelor's degree and less than ten per cent only finished the first half of secondary school, even though there are equally as much respondents in both categories as seen in Table 2 (N = 52 for 'Secondary School (Grade 8-10)' and N = 51 for 'Bachelor's Degree').

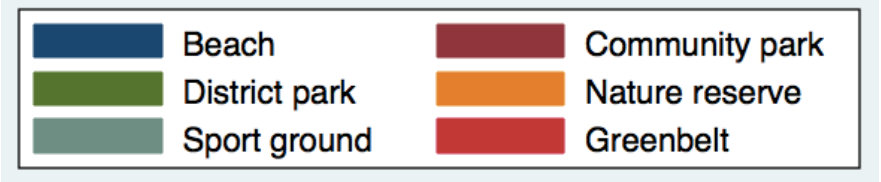
Figure 14: Favourite and most frequently visited UGS

a. Favourite, by number of children

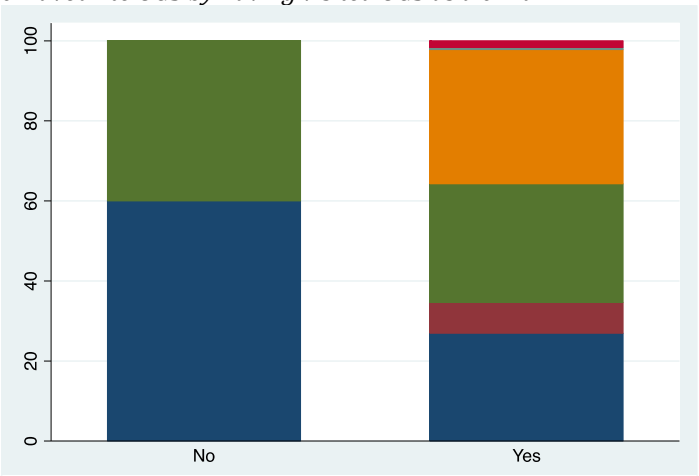


b. Most frequently visited, by number of children

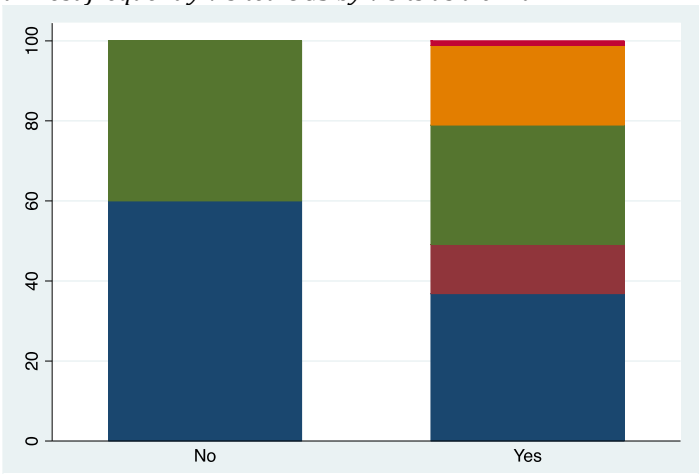




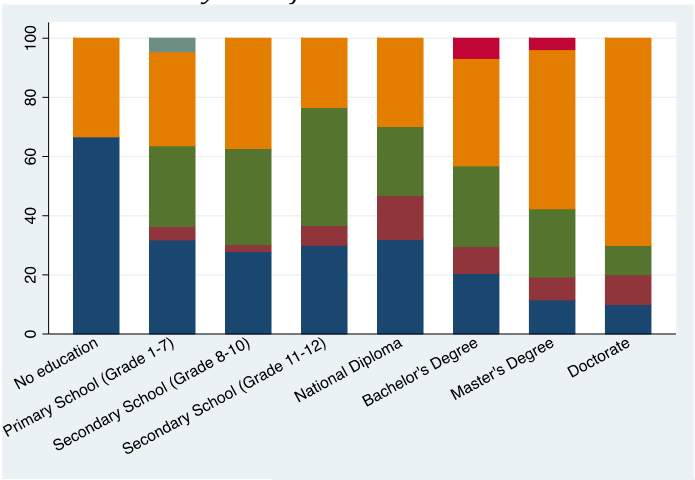
c. Favourite UGS by having visited UGS as a child



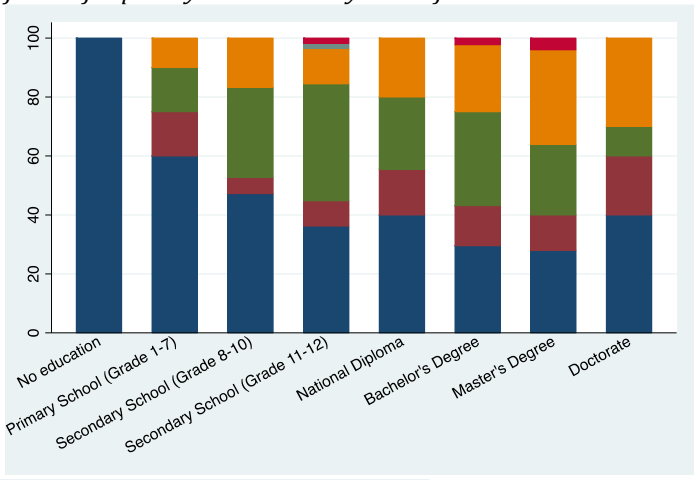
d. Most frequently visited UGS by visits as a child



e. Favourite UGS by level of education



f. Most frequently visited UGS by level of education



Of course there is also a very strong relationship between the purpose of visiting an UGS and the type of UGS that is visited. One example was given above, where higher educated people more often choose nature reserves as their favourite UGS and do so to see wildlife, birds and plants and to feel connected to nature. To give another simple example, all respondents that mentioned 'to swim' as the purpose of visiting UGSs, reported visiting the beach. There is one exception: a respondents that mentions swimming at her favourite UGS 'Table Mountain – Silvermine Dam Area', the only reservoir in Cape Town where swimming is allowed. Half of the people that visit their favourite UGS to relax or get away from a stressful environment, have a nature reserve as favourite UGS, whereas only five people that visit nature reserves most frequently, does so to relax (the beach is chosen most often in this case, namely 24 times) but rather to walk or hike (N=11) or to get a breath of fresh air (N=12). Even though the survey question asked for peoples 'purpose' of visiting this place, it cannot be said whether people generally choose an UGS based on the activity they want to do or whether they choose an activity based on the UGS they want to visit.

In order to determine which individual and locational characteristics truly significantly influence people's choices of favourite and most frequently visited UGS, a number of multinominal

logistic regression analyses were performed. Significant effects here relate to the probability of choosing a certain UGS type as favourite or most frequently visited over the probability of choosing the baseline category, 'community park'. Since these regression analyses produce large outputs, one exemplary outcome is presented in Table 10. Even though sport grounds, greenbelts and undeveloped green spaces were included in the model, the outcomes were unreliable due to low responses, and are therefore not shown in this table. The rest can be found in Appendix 10.

The analyses show some significance of locational factors. Naturally, travel distances to the favourite and most frequently visited UGS are significant for every type of UGS. Travel distances to the nearest UGS are not significant in explaining which types of UGSs are chosen, since for only 12 respondents the favourite UGS is equal to the nearest UGS and for only 20 people the most frequently visited UGS is equal to the nearest UGS. The areas of different UGSs within reach also exercise no significant effect. The neighbourhood of residence matters: the probability of choosing the beach or a district park as favourite or most frequently visited UGS over the probability of choosing a community park is significantly lower when the neighbourhood of residence is Marina da Gama compared to Lavender Hill. Since Lavender Hill and Marina da Gama are largely segregated from each other in terms of race, this suggests that also the indicator race would show significant effects. Indeed, as can be seen in Table 10, compared to white people, the 'risk' of choosing the beach or a district park as favourite or most frequently visited UGS is significantly higher for coloured people. The risk for a coloured person to have a beach as favourite UGS is 6.5 times the risk of a white person.

Household income only significantly influences the type of favourite and most frequently visited UGS when controlled for neighbourhood. This means that isolating household income from the shared explanatory power that 'neighbourhood' and 'household income' together have (as they are highly correlated), shows that the risk of choosing a district park over a community park as *favourite* urban green space significantly increases with an income above R7501 per month compared to those with no income. For those earning between R15,001 and R30,000 and more than R150,001, the risk of choosing a district park over a community park as *most frequently visited* UGS also increases compared to those with no income. This could have to do with the fact that the higher the income, generally the smaller the number of children people have (respectively on average 1.57 and 2.28 children for the two lowest income groups and 1 and 0.8 children for the two highest income groups). It was already showed above that the less children people have, the less likely they choose to visit community parks.

The only other demographic indicator that shows significant results is nationality, also included in Appendix 10. South Africans have significantly higher risks to choose a beach or district park as favourite and most frequently visited UGS compared to non-South Africans, while they also have double the risk of choosing a nature reserve as favourite UGS relative to a community park. Of the 54 non-South African respondents, 30 are from Western countries (mainly the United Kingdom), and 21 are from other African countries, mainly Zimbabwe.

The relationship between perceptions of importance of UGSs and the type of the favourite and most frequently visited UGS was also explored. Some significant results were found. The more important inner peace and tranquillity, the lower the risk that a beach was chosen as most frequently visited UGS compared to choosing a community park. With an increasing importance of 'environment', the risk that a beach was chosen as favourite UGS decreases. The risk of having a nature reserve as most frequently visited UGS increased with increasing importance of both 'environment' and 'family and socializing'.

Table 10: Multinominal logistic regression for relative risk ratios for favourite and most frequently visited UGS, by race

	Favourite	Most frequently visited
Community park	Base outcome	Base outcome
Beach		
White	Base	Base
Choose not to classify	1.083 (1.009)	0.260 (0.249)
Black African	2.709 (3.111)	2.146 (1.767)
Coloured	3.792** (2.234)	2.341* (1.129)
Constant	1.846* (0.636)	2.56*** (0.755)
District park		
White	Base	Base
Choose not to classify	2.528 (2.226)	1.4545 (1.134)
Black African	2.889 (3.397)	0.727 (0.766)
Coloured	6.501*** (3.871)	3.545** (1.803)
Constant	1.384 (0.504)	1.375 (0.451)
Nature reserve		
White	Base	Base
Choose not to classify	0.398 (0.384)	1.066 (0.851)
Black African	1.327 (1.511)	1.280 (1.182)
Coloured	1.698 (0.973)	0.880 (0.497)
Constant	3.769 (1.176)	1.563 (0.500)
N	264	250

* p<0.1, ** p<0.05, *** p<0.01

It is interesting to see which exact UGSs people from different neighbourhoods choose as their favourite, instead of merely looking at the types of UGS people choose, as done above. Table 11 compares the top favourite UGSs of 75 per cent of the people of the two poorest neighbourhoods Lavender Hill and Seawinds and of the two wealthiest neighbourhoods Lakeside and Marina da Gama. In Lavender Hill and Seawinds, 75 per cent of the people choose only respectively six and five different UGSs as their favourite ones. In Lakeside and Marina da Gama this is respectively eight and nine different favourite UGSs. In the poorer neighbourhoods, mainly district parks are favourite and there are no community parks and greenbelts in the list. The favourite UGSs of the wealthier neighbourhoods are much more varied: all types of UGSs occur except for the undeveloped green space. For many of the UGSs that occur on the lists of both the poor and the wealthy neighbourhoods, people in the poorer neighbourhoods have to travel further, which means that people from wealthier areas generally live closer to UGSs that are seen as desirable than people from poorer areas. To illustrate this, it's on average 4.21 kilometres to Muizenberg beach from those living in Lavender Hill, while it's only 1.99 kilometres for those living in Marina da Gama. Zandvlei District Park is over six kilometres from Lavender Hill residents, and less than half a kilometre for Lakeside residents. Many people in Marina da Gama also have the privilege to be living in their favourite UGS, Park Island Community Park.

In fact, for 17.5 per cent of the people living in Marina da Gama and for ten per cent of those living in Lakeside (and for eight per cent of the white people), the favourite UGS is the one that is nearest to them (which is in many cases Zandvlei District Park and Park Island Community Park). This is true for nobody living in Lavender Hill and Seawinds, for zero black African persons and for only one coloured person. This is all despite the fact that there is no clear difference between the distance people from different neighbourhoods would have to travel to their nearest UGS (86, 80 and 118 meters for Lavender Hill, Seawinds and Vrygrond/Capricorn respectively, versus 118, 88 and 36 meters for Muizenberg, Lakeside and Marina da Gama respectively).

Table 11: Favourite UGSs per neighbourhood

Lavender Hill

	%	% cum.	Type	km
1. Muizenberg Beach	26.67	26.67	B	4.21
2. The Company's Gardens	24.44	51.11	DP	22.16
3. Zandvlei District Park	8.89	60	DP	6.08
4. Wynberg Park	8.89	68.89	DP	11.10
5. Kirstenbosch Gardens	4.44	73.33	R	13.30
6. Maynardville Park	4.44	77.77	DP	9.22

Seawinds

	%	% cum.	Type	km
1. Zandvlei District Park	27.27	27.27	DP	5.76
2. Fish Hoek	18.18	45.45	B	8.10
3. Arderne Gardens	18.18	63.63	DP	12.03
4. Muizenberg Beach	9.09	72.72	B	4.07
5. Tokai Forest	9.09	81.81	R	7.18

Lakeside

	%	% cum.	Type	km
1. Table Mountain – SDA	18.18	18.18	R	8.61
2. Kirstenbosch Gardens	13.64	31.82	R	13.07
3. Muizenberg Beach	9.09	40.91	B	3.28
4. Zandvlei District Park	9.09	50	DP	0.44
5. Green Point Park	9.09	59.09	DP	25.47
6. Tokai Forest	9.09	68.18	R	5.58
7. Park Island CP	4.55	72.73	CP	4.28
8. Constantia Greenbelt	4.55	77.28	GB	10.36

Marina da Gama

	%	% cum.	Type	km
1. Park Island CP	21.43	21.43	CP	0.76
2. Muizenberg Beach	16.67	38.1	B	1.99
3. Table Mountain – SDA	7.14	45.24	R	10.62
4. The Company's Gardens	7.14	52.38	DP	23.49
5. Kirstenbosch Gardens	4.76	57.14	R	14.32
6. Zandvlei District Park	4.76	61.9	DP	2.87
7. Constantia Greenbelt	4.76	66.66	GB	11.76
8. Table Mountain - MM	4.76	71.42	R	5.68
9. Boulders Beach	4.76	76.18	B	17.66

*B=beach; DP=district park; R=nature reserve; CP=community park; GB=greenbelt | SDA=Silvermine Dam Area; MM=Muizenberg Mountains

Knowing this, it is also notable that for over twenty per cent of people living in Lakeside and Marina da Gama, the UGS they visit most frequently is the one nearest to them (and for almost 14 per cent of white people). This is true for less than five per cent of Lavender Hill residents and less than ten per cent of Seawinds residents, and for approximately six per cent of black people and two per cent of coloured people. On the other hand, for about half the people the favourite UGS is the same one as the most frequently visited one, irrespective of neighbourhood or race.

The reason for this is simple. The UGSs in and around Lavender Hill, Seawinds and Vrygrond/Capricorn are much less desirable than those in and around Muizenberg, Lakeside and Marina da Gama. Respondents from the poorest three neighbourhoods rate the state of UGSs in Cape Town with an average of 3.0 (out of 5), whereas those from the three wealthiest neighbourhoods of 3.5. Also, whereas for 34 per cent of people living in the three poorest neighbourhoods the nearest UGS is an undeveloped green space, this is only true for 11 per cent of people living in the three wealthiest neighbourhoods. Due to (gang) violence and the use of open spaces as dumping grounds for garbage, these undeveloped UGSs are experienced as negative spaces. Especially in Lavender Hill, the UGSs are very unsafe. Shootings during daytime are not uncommon, and casualties from stray bullets occur from time to time among playing children (A. Roberts, personal communication, June 20, 2017; D. Gibbs, personal communication, June 20, 2017; F. Abbas, personal communication, June 22, 2017; I. Jones, personal communication, June 20, 2017; L. Matschke, June 20, 2017; S. Granger, June 21, 2017). From this, a probable explanation follows for the fact that people from Lavender Hill are more likely to visit district parks or beaches than people from Marina da Gama. People from Lavender Hill travel anyway to visit UGSs. Since they have already incurred a certain amount of time and travel costs, they then rather choose for something more 'special' than a community park.

The fact that non-white neighbourhoods are much less endowed with formal and desirable UGSs (for example, in both Lavender Hill and Seawinds, people have on average zero square meters of district park within their reach, whereas in Lakeside and Marina da Gama, people have on average 83,967 and 95,114 square meters of district park within their reach), can be traced back to Apartheid history. The more desirable parts of the city were designated as white areas. When coloured communities were built to which people were forcibly moved, no attention was given to creating to valued green spaces, as enjoying the outdoors was mainly a pastime for

whites. (A. Roberts, personal communication, June 20, 2017; I. Jones, personal communication, June 20, 2017; L. Matschke, personal communication, June 20, 2017).

A similar analysis as the one shown in Table 11, when conducted for most frequently visited UGS shows less variety between neighbourhoods, mainly because Muizenberg Beach is visited very frequently by people of all neighbourhoods: it ranks first or second in all neighbourhoods, and third in Lakeside (Sheraton Park/Coniston Park and Kirstenhof not taken into consideration because of low responses). One third of the people living in Marina da Gama visit Park Island most often. The tables related to these results can be found in Appendix 11.

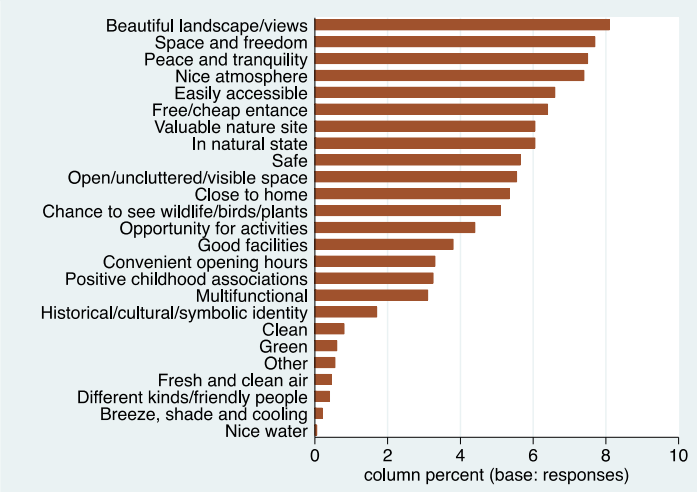
5.2.2 Positive and negative attributes

It varies between favourite and most frequently visited UGSs, between types of UGSs and of course between specific UGSs themselves how people judge them in terms of positive and negative attributes. Figure 15 shows a first exploration into what people like and dislike about their favourite and most frequently visited UGSs. The responses are shown in percentages so that the positive and negative attributes of the favourite UGS can be compared with those of the most frequently visited UGS.

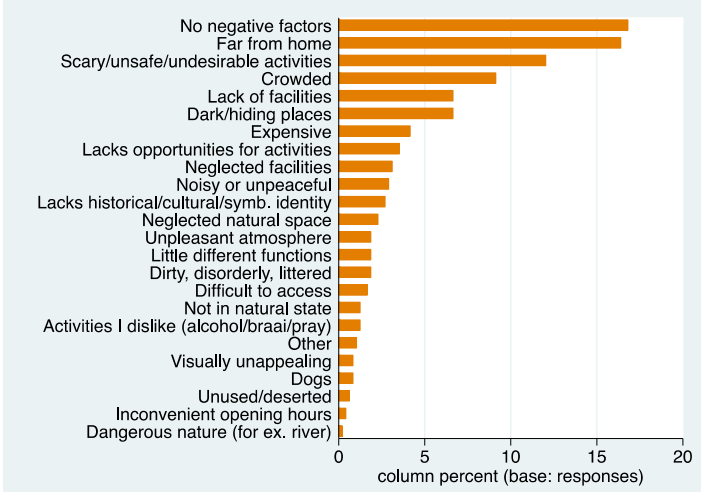
'Close to home' is much more often mentioned for the most frequently visited UGS than for the favourite UGS, and easily accessible is also mentioned more often. While the most common negative attribute of the favourite UGS is 'far from home', it ranks third for the most frequently visited UGS. The most common negative attributes for the most frequently visited UGS is 'scary/unsafe/undesirable activities taking place'. 'Expensive' ranks 6th for the favourite UGS, but only 13th for the most frequently visited UGS. Neglected facilities and neglected natural space are mentioned much more often as negative aspects of the most frequently visited UGS than of the favourite UGS. In total, 2024 positive attributes were mentioned for 270 favourite UGSs (7.5 per respondent) and 1821 positive attributes for 250 most frequently visited UGSs (7.3 per respondent). Overall, respondents are equally as negative about their favourite UGS as about their most frequently visited one: 514 negative attributes for 202 favourite UGSs (2.1 per respondent) and 290 negative attributes for most frequently visited 146 UGSs (2.0 per respondent). On the other hand, 48 favourite UGSs were said to not have any negative attributes, while this is 81 for most frequently visited UGSs of which there are 46 cases in which the favourite UGS is the same as the most frequently visited UGS for that respondent.

Figure 15: Positive and negative attributes favourite and most frequently visited UGS

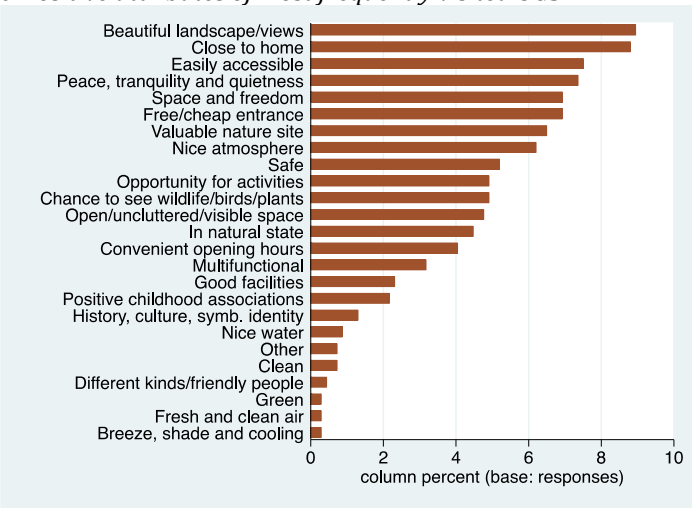
a. Positive attributes favourite UGS



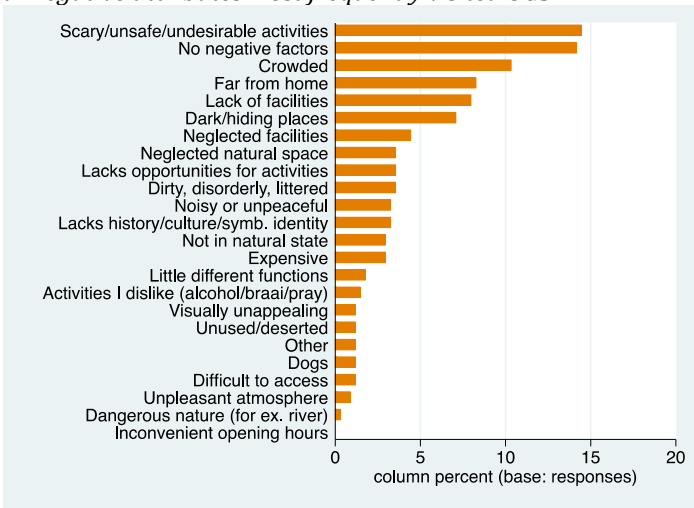
b. Negative attributes most favourite UGS



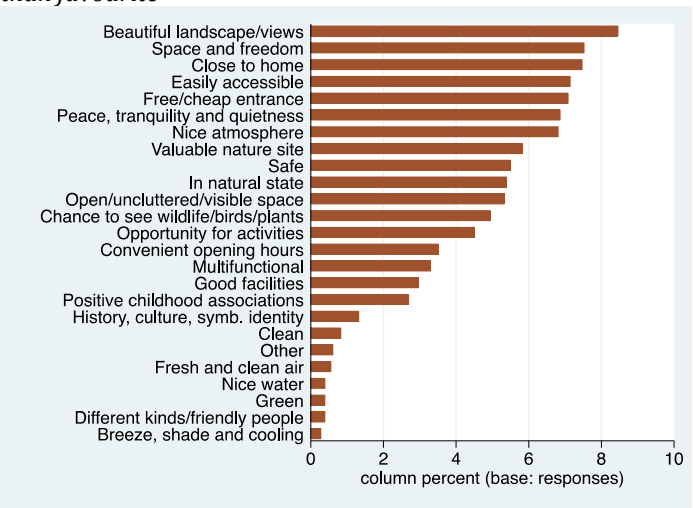
c. Positive attributes of most frequently visited UGS



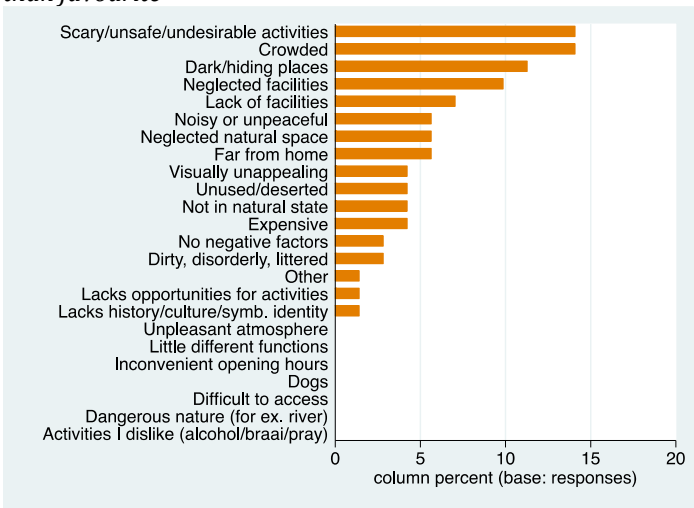
d. Negative attributes most frequently visited UGS



d. Positive attributes most frequently visited UGS if different than favourite



e. Negative attributes most frequently visited UGS if different than favourite



As mentioned at the start of this sub-chapter, it varies between type of UGS how they are judged in terms of positive and negative attributes. Table 12 shows for every type of UGS the most often mentioned positive attributes of the two most popular UGSs (measured in count of unique respondents that identified the UGS as either favourite, most frequently visited, or both, regardless of whether it was the favourite, most frequently visited UGS, or both). Thus, if a respondent said their favourite is simultaneously their most frequently visited UGS, it was only counted once. Sport grounds, undeveloped green spaces and greenbelts were left out due to low responses. The results are shown in percentage of people mentioning this positive attribute.

For all popular UGSs except for Park Island CP, beautiful landscape and views is one of the five most mentioned positive attributes of the most popular UGSs per type of UGS. All popular UGSs but Fish Hoek are found to provide space and freedom. Solely Park Island CP and Fish Hoek are often thought of as safe. Only for Muizenberg Park, the chance to see wildlife, birds and plants was often mentioned. 'Valuable nature site' is only found in the two lists of the nature reserves. The least often mentioned positive attributes for all UGS types were green; clean; different kinds of and nice people; breeze, shad and cooling, and; nice water. The five most often mentioned negative attributes of the two most popular UGSs per type of UGS are added in Appendix 12.

Table 12: Positive attributes of two most popular UGSs per UGS-type

a. Beaches

Muizenberg Beach (70 unique cases)		
	Freq.	% of responses
Beautiful landscape/views	40	8.95
Close to home	39	8.72
Free/cheap entrance	36	8.05
Easily accessible	35	7.83
Space and freedom	31	6.94

Fish Hoek (11 unique cases)		
	Freq.	% of responses
Nice atmosphere	5	9.43
Beautiful landscape/views	5	9.43
Peace, tranquillity, quietn.	4	7.55
Safe	4	7.55
Positive childhood	4	7.55

b. Community parks

Park Island CP (22 unique cases)		
	Freq.	% of responses
Close to home	13	8.84
Easily accessible	13	8.84
Space and freedom	13	8.84
Safe	13	8.84
Peace, tranquillity, quietn.	12	8.16

Muizenberg Park (5 unique cases)		
	Freq.	% of responses
Close to home	3	13.64
Space and freedom	3	13.64
Free/cheap entrance	2	9.09
Easily accessible	2	9.09
Nice atmosphere	2	9.09
Beautiful landscape/views	2	9.09
Chance to see w/b/p	2	9.09

*w/b/p=wildlife/birds/plants

c. District parks

Zandvlei District Park (37 unique cases)		
	Freq.	% of responses
Close to home	22	9.52
Opportunity for activities	18	7.79
Beautiful landscape/views	18	7.79
Free/cheap entrance	16	6.93
Space and freedom	16	6.93

Green Point Park (19 unique cases)		
	Freq.	% of responses
Nice atmosphere	16	9.52
Space and freedom	15	8.93
Free/cheap entrance	14	8.33
Beautiful landscape/views	13	7.74
Easily accessible	12	7.14

d. Nature reserves

Kirstenbosch Gardens (27 unique cases)		
	Freq.	% of responses
Beautiful landscape/views	22	8.94
Nice atmosphere	21	8.54
Peace, tranquillity, quietn.	21	8.54
Valuable nature site	19	7.72
Space and freedom	18	7.32

Table Mountain – SDA (16 unique cases)		
	Freq.	% of responses
Close to home	13	7.26
Valuable nature site	13	7.26
In natural state	12	6.70
Easily accessible	12	6.70
Nice atmosphere	12	6.70
Space and freedom	12	6.70
Peace, tranquillity, quietn.	12	6.70
Beautiful landscape/views	12	6.70

The ANOVA-analysis will show whether there is a significant difference between how different groups of people regard their favourite and most frequently visited UGS in terms of their positive and negative attributes. As mentioned in section 4.4 Data collection and as more thoroughly explained later in section 7.1 Limitations and further research, these results should be interpreted carefully, since the difference between groups of people can be influenced by the method through which the questionnaire was filled out, face-to-face or online.

From the individual characteristics there was especially strongly significant difference between 'races' in terms of opinions on positive and negative aspects of their favourite and most frequently visited UGS. Table 13 shows the coefficients of the ANOVA model and the extent to which the opinions of the races statistically significantly differ from the base category 'white'. For illustration, the first five positive attributes and the first five negative attributes in the random order of appearance in the questionnaire, are shown in the table. The results of all 25 positive and 24 negative attributes can be found in Appendix 13.

Table 13: ANOVA: positive and negative attributes of favourite and most frequently visited UGS

	Dependent variable	White	Choose no clas.	Black African	Coloured	Constant	N
	Positive attributes of favourite UGS						
(1)	Close to home	Base	-0.065 (-0.59)	-0.444*** (-4.18)	-0.333*** (-5.88)	0.539*** (12.93)	291
(2)	Valuable nature site	Base	-0.178 (-1.66)	-0.509*** (-4.93)	-0.461*** (-8.36)	0.652*** (16.06)	291
(3)	Free/cheap entrance	Base	-0.152 (-1.33)	-0.483*** (-4.39)	-0.347*** (-5.91)	0.626*** (14.49)	291
(4)	Multifunctional	Base	0.003 (0.03)	-0.365*** (-4.06)	-0.284*** (-5.92)	0.365*** (10.34)	291
(5)	In natural state	Base	-0.143 (-1.34)	-0.479*** (-4.69)	-0.493*** (-9.04)	0.670*** (16.68)	291
	Positive attributes of most frequently visited UGS						
(1)	Close to home	Base	-0.038 (-0.35)	-0.531*** (-5.23)	-0.516*** (-9.51)	0.722*** (-18.07)	291
(2)	Valuable nature site	Base	-0.126 (-1.19)	-0.457*** (-4.50)	-0.446*** (-8.21)	0.600*** (-15.02)	291
(3)	Free/cheap entrance	Base	-0.126 (-1.13)	-0.509*** (-4.76)	-0.410*** (-7.17)	0.652*** (-15.51)	291
(4)	Multifunctional	Base	-0.076 (-0.83)	-0.339*** (-3.85)	-0.258*** (-5.49)	0.339*** (-9.79)	291
(5)	In natural state	Base	-0.127 (-1.19)	-0.453*** (-4.42)	-0.386*** (-7.07)	0.548*** (-13.62)	291
	Negative attributes of favourite UGS						
(1)	No negative factors	Base	-0.051 (-0.47)	0.315** (-3.05)	0.078 (-1.41)	0.209*** (-5.13)	291
(2)	Far from home	Base	0.239* (-2.21)	-0.092 (-0.89)	0.037 (-0.67)	0.235*** (-5.76)	291
(3)	Lack of facilities	Base	-0.034 (-0.46)	-0.139 (-1.96)	-0.058 (-1.54)	0.139*** (-4.99)	291
(4)	Scary/unsafe/undesirable activities	Base	-0.138 (-1.51)	-0.248** (-2.83)	-0.200*** (-4.27)	0.296*** (-8.58)	291
(5)	Noisy or unpeaceful	Base	-0.026 (-0.55)	-0.026 (-0.58)	0.033 (-1.35)	0.026 (-1.47)	291
	Negative attributes of most frequently visited UGS						
(1)	No negative factors	Base	0.028 (0.31)	0.203* (2.37)	0.017 (0.36)	0.130*** (3.88)	291
(2)	Far from home	Base	0.132 (1.84)	0.065 (0.94)	0.003 (0.07)	0.078** (2.89)	291
(3)	Lack of facilities	Base	-0.017 (-0.24)	-0.074 (-1.11)	-0.063 (-1.77)	0.122*** (4.66)	291
(4)	Scary/unsafe/undesirable activities	Base	-0.051 (-0.56)	-0.209* (-2.42)	-0.069 (-1.50)	0.209*** (6.16)	291
(5)	Noisy or unpeaceful	Base	-0.052 (-1.10)	-0.005 (-0.10)	-0.023 (-0.94)	0.052** (2.92)	291

* p<0.1, ** p<0.05, *** p<0.01

Being black African or coloured is significantly negatively related to attaching either of the five positive attributes (close to home, a valuable nature site, free or cheap, multifunctional or in a natural state) to both the favourite or most frequently visited UGS, compared to being white. All other positive attributes, shown in Appendix 13, show similar levels of significance (at p<0.001), with the following exceptions for the favourite UGS: good facilities, positive childhood associations and different kinds and friendly people are only significant for black African people (negative coefficient), clean and green are only significant for coloured people (positive coefficient), and historical, cultural and symbolic identity; fresh and clean air; breeze, shade and cooling; nice water, and; other are insignificant for all races. For the most frequently visited UGS positive childhood associations is only significant for black Africans (negative coefficient) and clean, green, different kinds of and friendly people, and nice water are only significant for coloured people (all positive coefficient). Good facilities; history, culture and symbolic identity; fresh and clean air; breeze, shade and cooling, and; other are insignificant for all races. Thus, black Africans and coloured people are less likely positive about the UGSs they visit.

On the other hand, black Africans say significantly more often than white people that their favourite and most frequently visited UGSs have *no* negative attributes, and less often that they are scary, unsafe or have undesirable activities taking place. This is also true for coloured people, but only for the favourite UGS.

The fact that black African and coloured people are generally less positive about their favourite and most frequently visited UGS, while black Africans are also more likely to attribute no negative attributes to their favourite and most frequently visited UGS, suggests that they are less outspoken about the UGSs they visit. This could be due to the fact that black Africans are the population group that visit UGSs least often and thus have less strong opinions about them: on average black Africans visit 43 times a year, against 70 times for coloured people and 200 times for white people. (More on visit frequency will be discusses in section 5.3.1 Visit frequencies).

Since black African and coloured people have lower odds of regularly visiting UGSs, said by the experts to be caused by having other needs then visiting UGSs, longer travel distances to desirable UGSs or high real or perceived entry barriers (explained in section 5.3.1 Visit frequencies), they may be less likely to see them as positive spaces. S. Granger (personal communication, 22 June, 2017) explains this with Baba Dioum's (1986) quote: "In the end we will […] love only what we understand. We will understand only what we are taught.", meaning that people cannot appreciate what they do not understand and to which they are rarely exposed.

The fact that there is significant difference between races, is strongly related to the fact that also the difference between neighbourhoods is significant. The two are, as discussed before, strongly correlated: in an ANOVA model with 'close to home' as dependent variable and 'race' and 'neighbourhood' as independent variable, especially being coloured is strongly negatively correlated with living in Muizenberg, Lakeside and Marina da Gama (with a positive correlation of the coefficients of the model of respectively 0.66, 0.67 and 0.74).

The results are naturally largely dependent on which specific UGS the respondents are referring to. Among black Africans the Company's Gardens is the most common favourite UGS (13.33% of respondents), for coloured people this is Muizenberg Beach (15.97% of respondents) and for white people Kirstenbosch Gardens (14.81% of respondents).

Table 13 above and Appendix 13 compared all positive and negative attributes for one individual characteristic, namely race. It has been conducted for all other individual and locational characteristics, but only for the positive attributes 'close to home' and 'safe', and for their negative counterparts 'far from home' and 'scary, unsafe, undesirable activities'.

There is significant difference between different groups in the following individual characteristics when it comes to rating their favourite and/or most frequently visited UGS as close to home or far away: race, level of education, number of people in the household, age, opportunity to visit UGSs as a child, number of children, religion and nationality. The locational factors 'area of district park within reach', 'type of nearest UGS' and 'neighbourhood' show significance as well. Naturally, the actual distance to the favourite and most frequently visited UGS relates negatively to the feeling of having these UGSs close to home (and positively to feeling that they are far from home). All variables relating to visit frequency show significance: visit frequency and the feeling of having the visited UGS close by or far away are closely linked.

The individual variables level of education, gender, religion, household income and nationality show significant difference between categories when rating the favourite and/or most frequently visited UGS as safe or scary and unsafe. The locational variable 'area of district parks within reach' shows a positive significant effect on rating UGSs as safe. This could be explained by the fact that Cape Town's district parks are well utilized, and human presence can make UGSs (feel) safer (A. Roberts, personal communication, 20 June, 2017; D. Gibbs, personal communication, 20 June, 2017; S. Granger, personal communication, 22 June, 2017). Since the area of district park within reach directly links to the neighbourhood in which people live as showed in section 5.2.1 Favourite and most frequently visited UGS, also living in one of the three wealthier neighbourhoods significantly positively relates to rating UGSs as safe, compared to living in Lavender Hill. Visiting UGSs more often positively relates to finding them safe, which is not to say that higher visit frequencies influences people's feelings of safety. It may very well be that people's opinions influence their visit frequencies.

This section shows that both individual and locational indicators (especially area of district park within reach and neighbourhood of residence) influence people's UGS preferences in terms of the positive and negative attributes the UGSs have that they choose to visit.

5.3 UGS visit frequencies and motives

5.3.1 Visit frequencies

On average, people visit their favourite UGS 60 times a year, whereas the median is only 12. Muizenberg beach is the UGS visited most often: people that mentioned this UGS as being their favourite visited it 95 times a year on average, while for those having Muizenberg beach as most frequently visited UGS this is 108. The median number of yearly visits of Muizenberg beach is 52

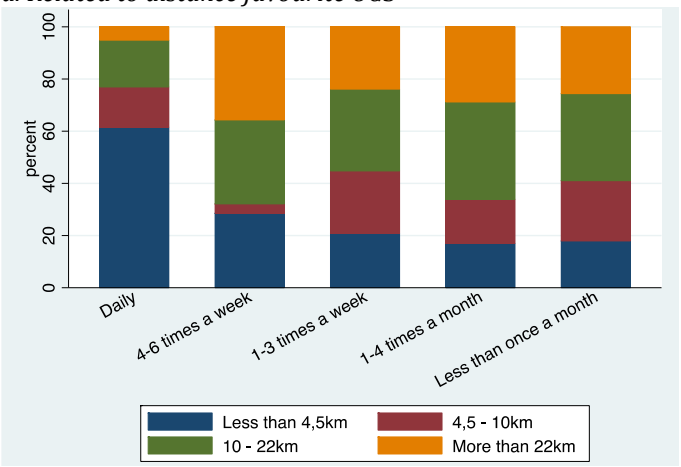
as favourite UGS and 78 as most frequently visited UGS. The higher average than median means that the people at the higher end of the spectrum visit UGS a lot more often than others. This section explores these differences in UGS visits.

The numbers on UGS visits show large variety between groups of people. For example, while the average person with a household income below R3,500 visits UGSs 30 times per year, those with a household income between R30,001 and R75,000 do so 156 per year. And people with a big garden (of over 50 m²) visit their favourite UGS precisely twice as often as those without garden. The average white person visits UGSs twelve times as often (145 times a year) as the black African person (12 times a year). People with children visit UGSs less often than people without children, except for those with only one child. The median number of yearly visits rises with a rising frequency of UGS visits as a child. For a complete overview of medians and means of UGS visits, see Appendix 14.

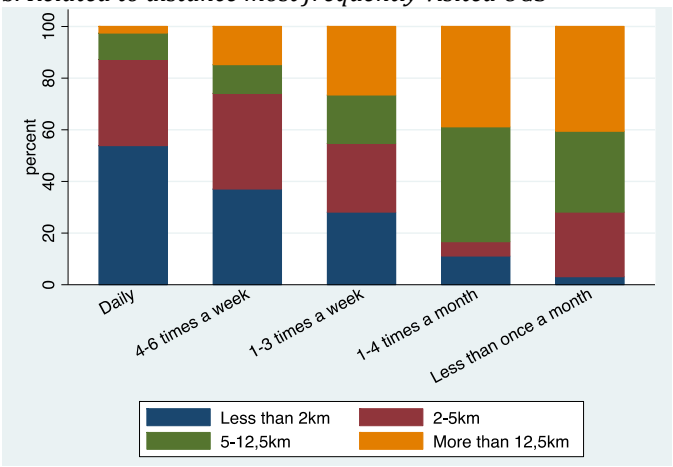
As mentioned in the section 2.2.7 Distance-decay effect, it is expected that the frequency of UGS visits decays with increasing distance to them. Figure 16 confirms this expectation, especially for the most frequently visited and the nearest UGS. The further away the most frequently visited and nearest UGS, the less often people visit UGSs in general. Taking Figure 16b below as an example: over half of all respondents visit UGSs daily when their most frequently visited UGS is less than two kilometres by road away, whereas less than 2% of all respondents visit UGSs daily when their most often frequently visited UGS is over 12,5 kilometres away. The distance decay effect is less obvious when it comes to frequency of use of the favourite UGSs.

Figure 16: Frequency of use vs. distance to UGS, in percentage of respondents

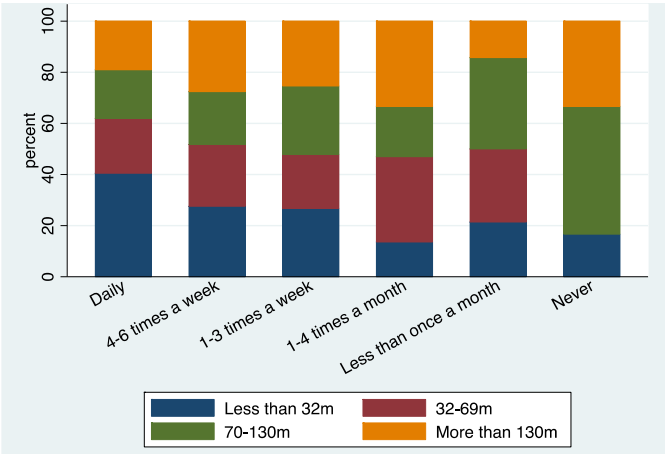
a. Related to distance favourite UGS



b. Related to distance most frequently visited UGS



c. Related to distance nearest UGS



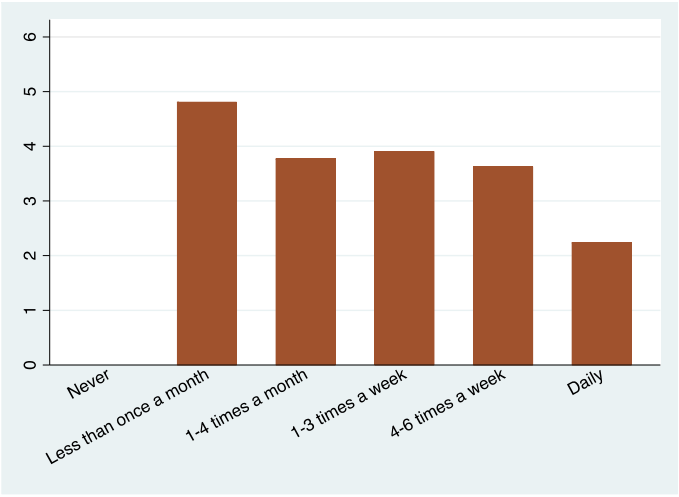
People seem to be willing to travel further for their favourite UGS than for their most frequently visited UGS. Therefore, the distance-decay function applies less to the favourite UGS than to the most frequently visited UGS.

When decomposing these figures according to neighbourhood of residence, the spatial inequality within the research area becomes clear again. There are 47 people visiting their favourite UGS daily, of which approximately 60 per cent (or 24 people) live less than 4,5 kilometres away. Ten of these 24 people are from Marina da Gama, three from Lakeside, eight from Muizenberg, whereas zero of these are from Lavender Hill or Seawinds, and only one from Vrygrond/Capricorn. The largest portion of this group has Park Island CP as their favourite UGS (N = 7) of which 6 are from Marina da Gama. While in total 18 people from Marina da Gama visit their favourite UGS daily, two from Lavender Hill, zero from Seawinds and one from Vrygrond/Capricorn do so. For only one of them, this UGS is within 4.5 kilometres from their home. And while people from Lavender Hill are much poorer, they travel on average 10 kilometres to their most frequently visited UGS, while people from Marina da Gama travel on average 5.8 kilometres.

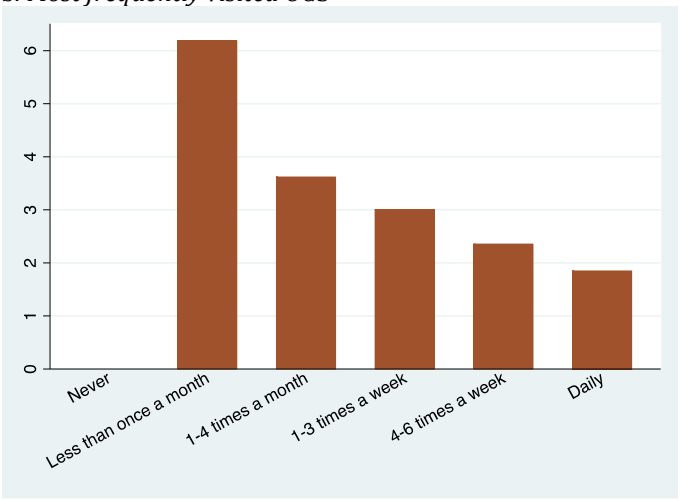
What Hanink & White (1999) found for visiting national parks in the United States, applies also to visiting UGSs in Cape Town: those visiting more often, do so for shorter amount of times. Figure 17 below shows this, especially for the most frequently visited UGS, and to a lesser extent also for the favourite UGS.

Figure 17: Average length of stay (hours), by visit frequency

a. Favourite UGS



b. Most frequently visited UGS



The result of the logistic regression analysis is presented in Table 14. As expected after looking at the graphs of frequency of use versus the distance UGSs above, the distance to the most frequently visited UGS is a significant predictor of visiting UGSs at least once a week. Naturally, the distance to the most frequently visited UGS matters more than the distance to the favourite UGS, because the fraction of total UGS visits of the former is bigger (that is, the favourite UGS is never visited more often than the most frequently visited UGS). The odds ratios show that the odds of visiting UGSs at least once a week decrease (value below 1) with increasing distances to the most frequently visited UGS.

The odds of visiting UGSs at least once a week significantly increase with increasing areas of district parks and nature reserve within reach, see model 2. It then follows logically that also the neighbourhood of residence matters, since the different neighbourhoods are unequally endowed with UGSs. This was tested in a separate model (3) because neighbourhood of residence is too directly related to areas of UGS within reach. Lavender Hill is the base category. The odds of visiting UGSs at least once a week are very significantly higher when the neighbourhood of residence is Vrygrond/Capricorn, Steenberg/Retreat, Muizenberg, Lakeside or Marina da Gama. The odds are almost 18 times higher if the neighbourhood of residence is Muizenberg versus

Lavender Hill. When added to the third model, 'race' shows no significance. This is because the race is highly correlated with neighbourhood. Especially being coloured is negatively correlated with living in the wealthy neighbourhoods Lakeside and Marina da Gama. Indeed, when only race is added (model 4), it can be seen that being coloured decreases the odds of visiting UGSs at least once a week to a third of the odds of white people. When controlling for all other individual characteristics (gender, age, income, education, employment status, marital status, number of children, religion, household size) and for having visited UGSs as a child, only distance to most frequently visited UGS, neighbourhood of residency, being a housewife (lower odds than being employed), having more than four children (higher odds than having no children) and being black African or coloured are highly significant (see Appendix 15).

Table 14: Odds ratios of potential predictors of visiting UGSs at least once a week

	(1)	(2)	(3)	(4)
Distance (km) to favourite	1.002 (0.13)	1.002 (0.09)	0.986 (-0.67)	1.006 (0.19)
Distance (km) to most freq. vis.	0.923*** (-3.89)	0.924*** (-3.67)	0.925*** (-3.50)	0.0929*** (.019)
Distance (km) to nearest	0.117 (-0.96)	0.0692 (-1.03)	0.00655* (-1.79)	0.1372 (0.317)
Area comm. park within reach		0.986 (-1.60)		
Area distr. park within reach		1.011*** (3.15)		
Area nature res. within reach		1.000* (-1.89)		
Area beach within reach		1.252 (0.96)		
Neighbourhood				
Lavender Hill			Base	
Seawinds			2.341 (1.04)	
Vrygrond/Capricorn			10.60*** (3.59)	
Steenberg/Retreat			8.684*** (3.52)	
Sheraton Park/Coniston Park			1.180 (0.13)	
Muizenberg			17.61*** (4.66)	
Lakeside			9.001*** (3.28)	
Marina da Gama			9.258*** (3.65)	
Race				
White				Base
Choose not to classify				0.514 (0.311)
Black African				0.416 (0.282)
Coloured				0.325*** (0.11)
N	211	211	207	207

* p<0.1, ** p<0.05, *** p<0.01

According to the expert interviews, this has largely to do with the set-up of the different neighbourhoods and their location relative to desirable UGSs, which can be traced back to Apartheid spatial policy, real or perceived accessibility barriers to desirable UGSs, people's status concerning their hierarchy of needs.

Due to the lack of desirable UGSs within the lower income neighbourhoods (Lavender Hill, Seawinds, Vrygrond/Capricorn), accessibility barriers arise. People have to travel further to find desirable UGSs than those living in the wealthier areas (Muizenberg, Lakeside, Marina da Gama), even though their incomes are lower, which increases spatial inequality. Still, the UGSs that are very close to, for example, Marina da Gama, are also close to, for example, Vrygrond/Capricorn. Perceived entry barriers may decrease the odds of visiting UGSs at least once a week here. Park Island CP is located behind a large wall separating Marina da Gama from the surrounding neighbourhoods and can therefore not easily be seen for those travelling past. "So they will grow up and maybe one day, […] they will go there and say: Man! Wow! I never knew this beauty is here." (I. Jones, personal communication, 20 June, 2017). Moreover, the few entrance roads to this area are guarded 24 hours per day. Even though they will not deny entry, people not living in Marina da Gama may feel unwelcome and may even be reported by residents. Nature reserves situated in the research area, such as Zandvlei Estuary, are also fenced for conservation purposes, also potentially creating perceived entry barriers, even though entry to Zandvlei Estuary is free of

charge (D. Gibbs, personal communication, 20 June, 2017; L. Matschke, personal communication, 20 June, 201).

It is also likely that especially coloured people from the lower income neighbourhoods *choose* to travel further to visit UGSs. This has been confirmed in the interviews. Before being forcibly relocated to neighbourhoods such as Lavender Hill, many people used to live very close to Table Mountain, for example people from District 6. "The mountain has kind of a deep symbolism for them. That historical connection with the mountain." (S. Granger, personal communication, 22 June, 2017). By travelling back to the mountain, they try to maintain and cherish this connection. Naturally, because the incomes of these people are generally lower, and the journey is costly, this affects the frequency with which these UGSs can be visited (A. Roberts, personal communication, 20 June, 2017, F. Abbas, personal communication, 21 June 2017; I. Jones, personal communication, 20 June 2017; S. Granger, personal communication, 22 June, 2017).

The maps in Figure 18 and Figure 19 show the movement patterns of lower income households (with a monthly income of at most R15 000) to their favourite and most frequently visited UGSs compared to the movement patterns of higher income households (with a monthly income of at least R15 001). The thickness of the line shows the visit frequency. People with lower incomes indeed choose less variedly, travel further and stay within the own neighbourhood less often.

Figure 18: Movement patterns to favourite UGS

a. Lower income households

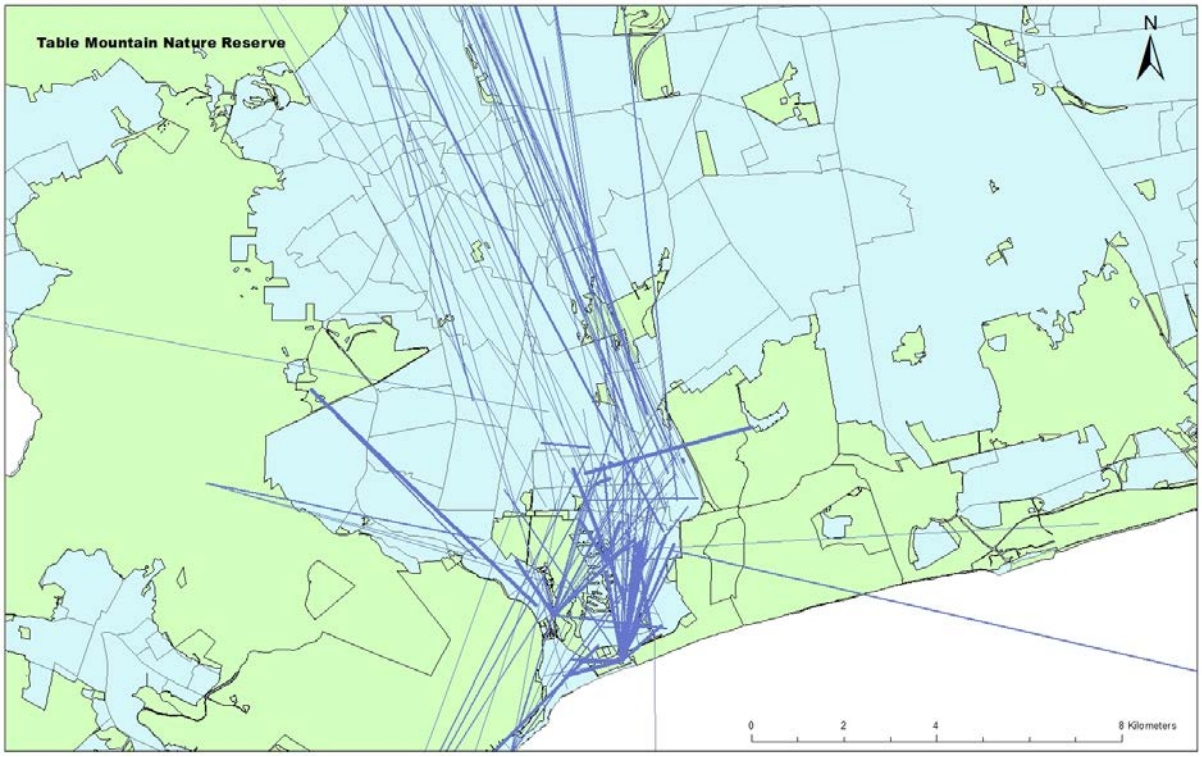
Spatial data: City of Cape Town (n.d.-a) and Nina van Rijn; Map: Nina van Rijn

b. Higher income households

Spatial data: City of Cape Town (n.d.-a) and Nina van Rijn; Map: Nina van Rijn

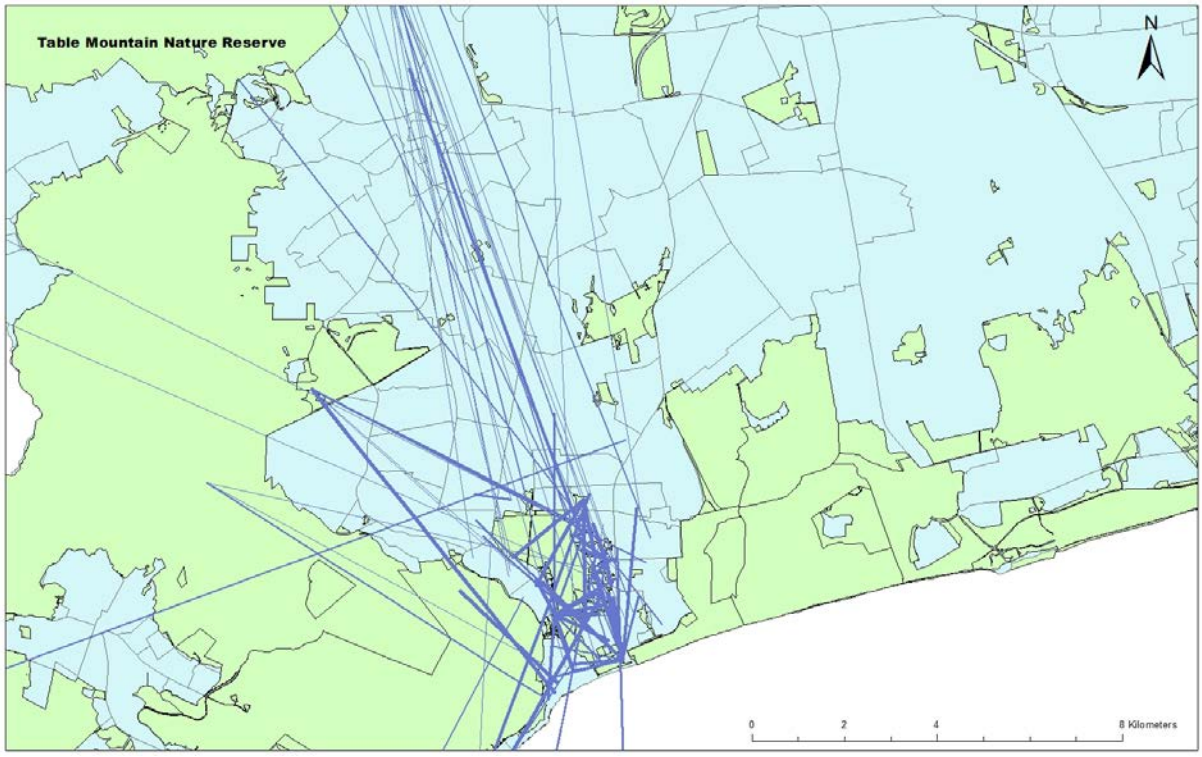
Figure 19: Movement patterns to most frequently visited UGS

a. Lower income households



Spatial data: City of Cape Town (n.d.-a) and Nina van Rijn; Map: Nina van Rijn

b. Higher income households



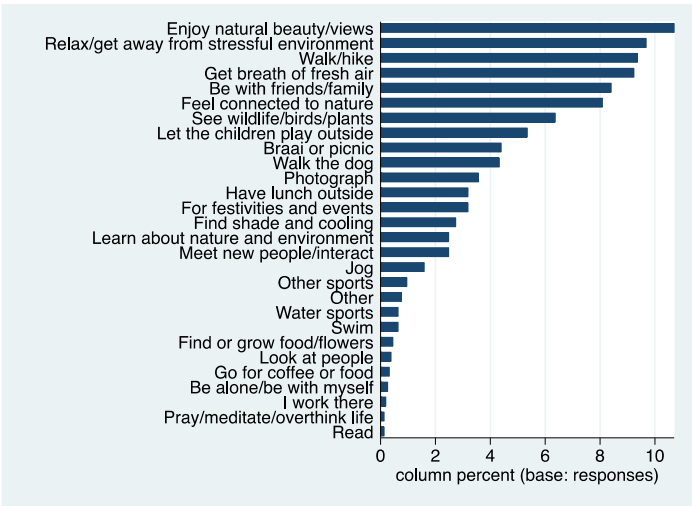
Spatial data: City of Cape Town (n.d.-a) and Nina van Rijn; Map: Nina van Rijn

5.4.1 Purposes of UGS visits

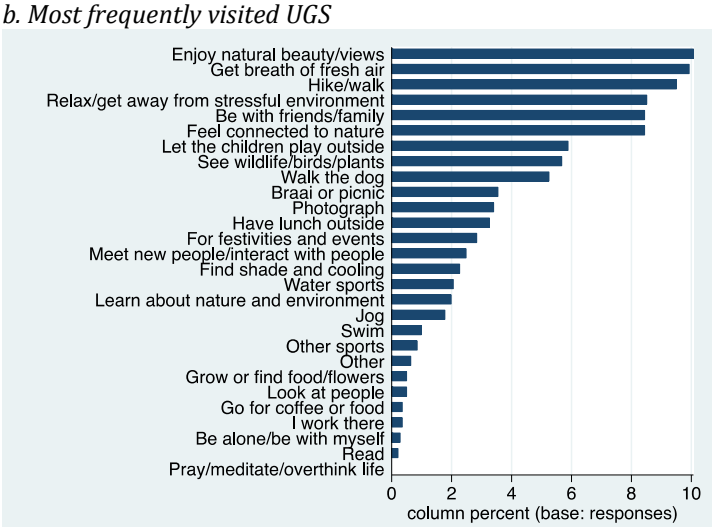
People visit UGSs for different reasons. Figure 20 gives an overview of the purposes for which people visit their favourite and most frequently visited UGS. The sum of the indicated purposes is much higher (2014 for favourite UGSs; 1844 for most frequently visited UGSs) than the number of respondents (273 for favourite UGSs, 253 for most frequently visited UGSs), because most respondents reported more than one purpose. To enjoy natural beauty and views is the most popular purpose for the favourite UGS (N=168) and the most frequently visited UGS (N=142). The favourite UGS is consecutively mostly visited to relax or get away from a stressful environment (N=152), to walk or hike (N=147) and to get a breath of fresh air (N=145). For the most frequently visited UGS this is: get a breath of fresh air (N=140), hike or walk (N=134) and relax or get away from a stressful environment (N=120). Least often the purpose of visit of the favourite and most frequently visited UGSs is to be alone, for work, to read or to pray, meditate and overthink life.

Figure 20: Purposes of UGS visits

a. Favourite UGS



b. Most frequently visited UGS



c. Most frequently visited UGS if different than favourite UGS

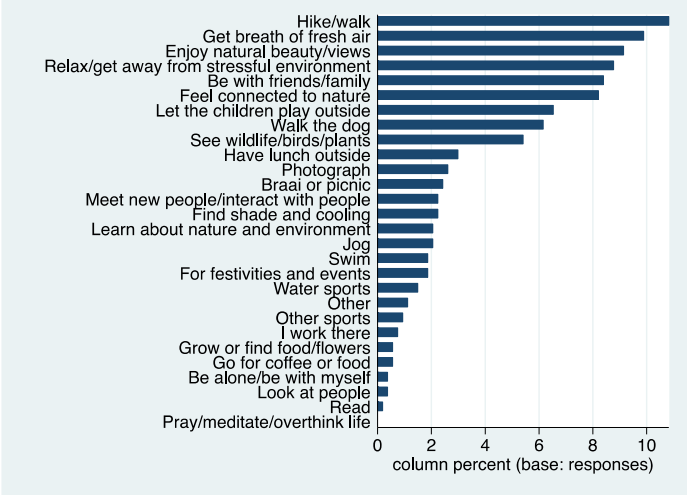


Table 15 shows what percentage of the people visiting each of the UGS-types does so for each of the ten most popular purposes, regardless of whether they visit it as their favourite or most frequently visited UGS. For example, of all 143 people visiting the beach, half do so to walk or hike, and more than half to enjoy the natural beauty and views. Since people mostly visit UGSs for more than one purpose, the total does not add up to 100 per cent. For people that have the same favourite as most frequently visited UGS, the purpose for visiting this space was only counted once. In bold is the purpose for which the respective type of UGS is visited mostly. The full list can be found in Appendix 16.

Table 15: Purposes of visiting UGS per type of UGS, % of cases

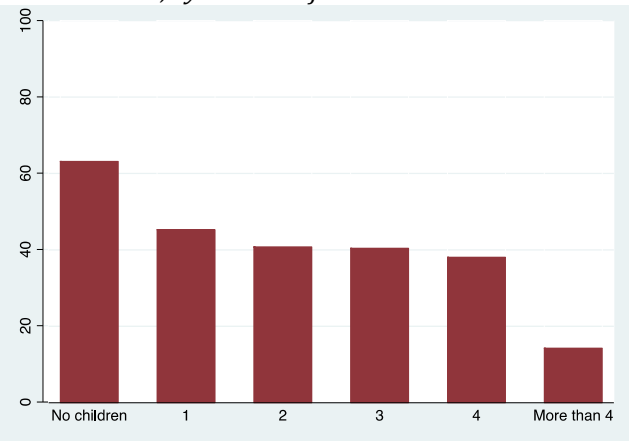
	B	CP	DP	R	Freq.
Enjoy natural beauty/views	**58.04**	53.49	47.87	65.08	197
Walk/hike	50.35	**60.47**	43.62	**66.67**	184
Relax/get away from stressful	**58.04**	46.51	**51.06**	44.44	184
Get breath of fresh air	50.35	51.16	45.74	61.90	182
Be with friends/family	40.56	44.19	**51.06**	57.14	165
Feel connected to nature	43.36	44.19	37.23	60.32	159
See wildlife/birds/plants	25.17	41.86	29.79	46.03	115
Let the children play outside	28.67	27.91	40.43	26.98	112
Walk the dog	18.88	37.21	28.72	42.86	97
Braai or picnic	11.89	9.30	34.04	23.81	70
Cases	143	43	94	63	

*B=Beach; CP=Community park;DP=District park;R=Nature reserve

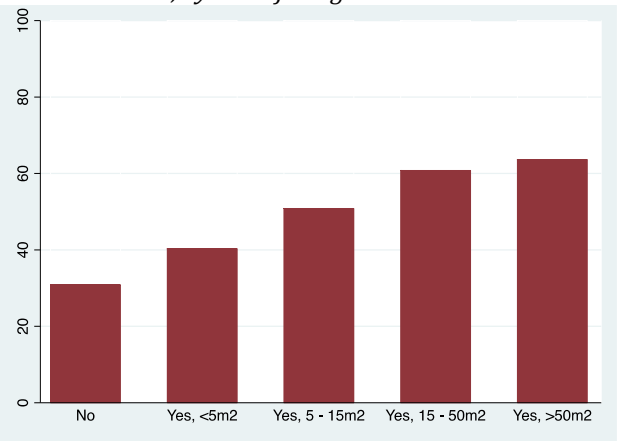
The purposes of visiting UGSs not only vary between the type of the visited UGSs, but also between groups of people, the results for some of which are visualized in Figure 21 below. The figures show what percentage of people in a certain category (for example, people with no children, with one child, two children, three children, four children, or more than four children) visits UGSs for the discussed purpose (for example, walk or hike). Since with all purposes of visits, combined with all individual and locational variables 2016 combinations can be made, a small selection of the most interesting graphs, those that show the clearest patterns, is presented here. A larger selection can be found in Appendix 17 and Appendix 18. The figures below show the results for the most frequently visited UGS. The appendices show the results of both the favourite and most frequently visited UGS. Again, the results may have been influenced by the division of the data collection into online and face-to-face questionnaires.

Figure 21: Purposes of visiting most frequently visited UGS

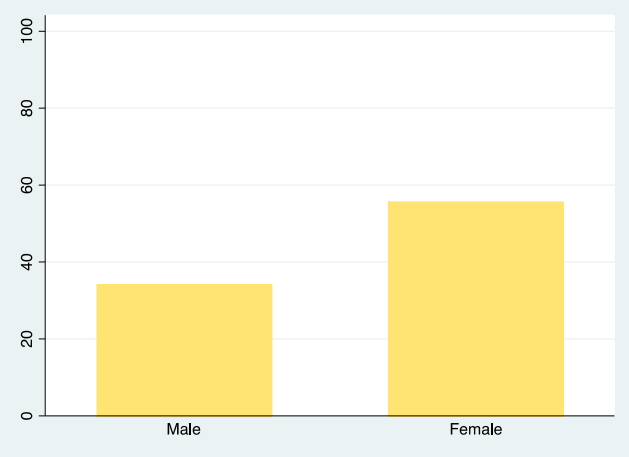
a. Walk or hike, by number of children



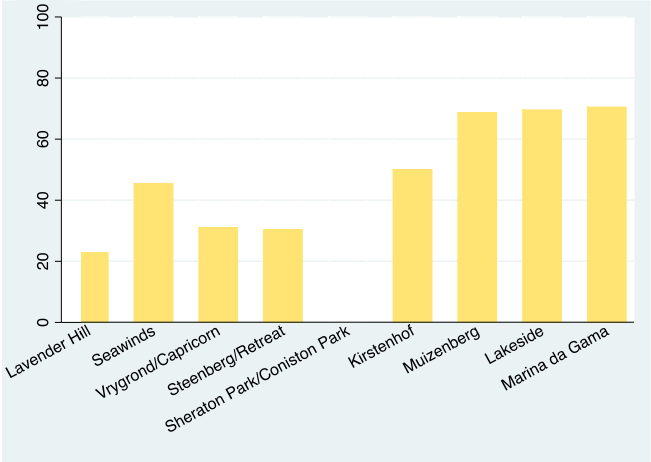
b. Walk or hike, by size of the garden



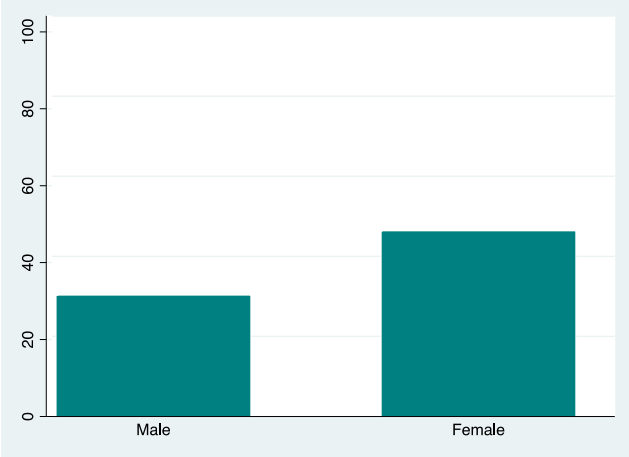
c. Enjoy natural beauty and views, by gender



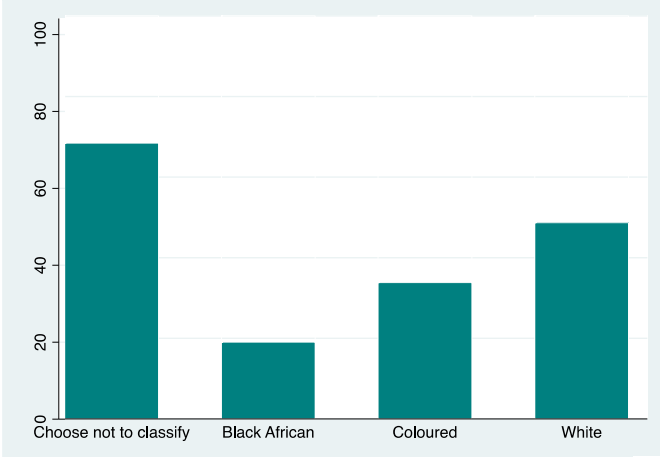
d. Enjoy natural beauty and views, by neighbourhood



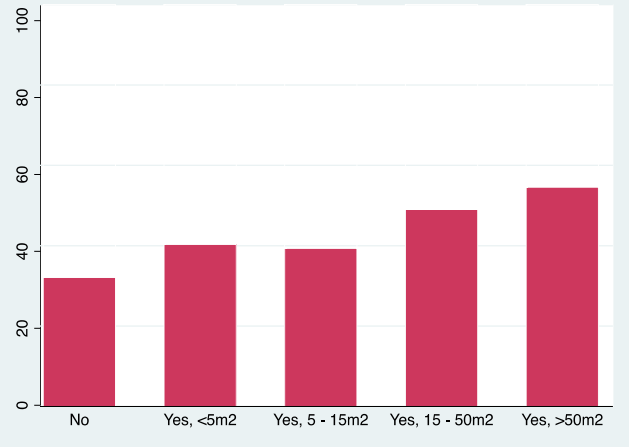
e. Be together with friends and family, by gender



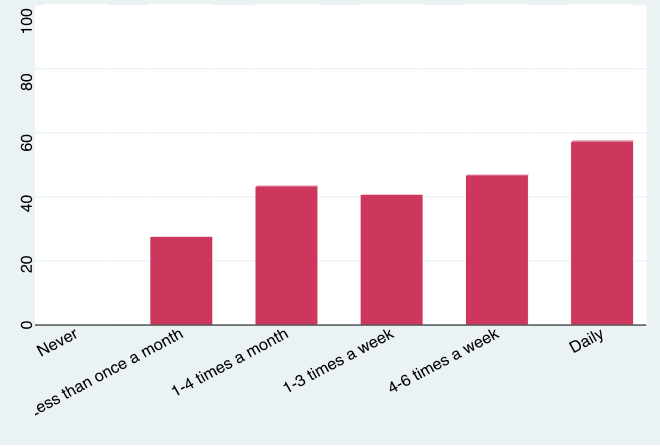
f. Be together with friends and family, by race



g. Feel connected to nature, by size of the garden



h. Feel connected to nature, by visit frequency



In order to identify whether the differences between the purposes of different groups of people for visiting UGSs are statistically significant, a set of ANOVA-analyses have been conducted. The output of these analyses is again very large. Therefore, only the five most popular reasons for visiting UGSs are assessed. The results for these analyses for more individual and locational factors can be found in Appendix 19. It was found earlier that the three connected variables neighbourhood, household income and race very well explain people's urban green space attitudes. Therefore, in Table 16, the results for 'neighbourhood' are shown.

Table 16: ANOVA: positive and negative attributes of favourite and most frequently visited UGS

		LH	Seawinds	Vrygr./Capric.	Steenb./Retr.	Sher. P./Con. P.	Kirstenhof	Muizenberg	Lakeside	M. da Gama	Constant	N
Purpose (favourite UGS)												
(1)	Walk/hike	Base	-0.116 (-0.77)	-0.0224 (-0.21)	0.0351 (0.35)	0.0768 (0.44)	0.202 (0.61)	0.408*** (4.58)	0.528*** (4.63)	0.338*** (3.65)	0.298*** (4.87)	258
(2)	Enjoy nat. beauty/views	Base	0.142 (0.91)	-0.0587 (-0.54)	0.142 (1.37)	-0.404* (-2.25)	0.0965 (0.28)	0.302** (3.31)	0.379** (3.23)	0.256** (2.68)	0.404*** (6.42)	258
(3)	Get breath of fresh air	Base	0.282 (1.86)	-0.0218 (-0.21)	0.131 (1.30)	-0.263 (-1.52)	0.237 (0.72)	0.423*** (4.77)	0.563*** (4.96)	0.282** (3.06)	0.263*** (4.32)	258
(4)	Be with friends/family	Base	0.0303 (0.19)	-0.126 (-1.15)	0.121 (1.15)	0.0417 (0.23)	0.167 (0.48)	0.294** (3.16)	0.362** (3.04)	0.0758 (0.78)	0.333*** (5.22)	258
(5)	Feel connected to nature	Base	0.171 (1.18)	-0.0551 (-0.55)	0.171 (1.78)	-0.193 (-1.16)	0.307 (0.97)	0.376*** (4.44)	0.720*** (6.64)	0.398*** (4.52)	0.193** (3.32)	258
Purpose (MFV UGS)												
(1)	Hike/walk	Base	0.129 (1.02)	-0.0181 (-0.21)	0.129 (1.54)	0.0724 (0.50)	-0.0526 (-0.19)	0.261*** (3.53)	0.295** (3.12)	0.243** (3.16)	0.0526 (1.04)	258
(2)	Enjoy nat. beauty/views	Base	0.164 (1.39)	0.0859 (1.05)	0.0734 (0.93)	-0.0175 (-0.13)	-0.0175 (-0.07)	0.296*** (4.28)	0.287** (3.23)	0.232** (3.22)	0.0175 (0.37)	258
(3)	Get breath of fresh air	Base	0.00319 (0.03)	-0.0532 (-0.64)	0.00319 (0.04)	-0.0877 (-0.64)	-0.0877 (-0.33)	0.285*** (4.05)	0.217* (2.40)	0.117 (1.60)	0.0877 (1.82)	258
(4)	Be with friends/family	Base	0.0766 (0.64)	-0.0363 (-0.44)	0.107 (1.35)	0.0197 (0.14)	-0.105 (-0.40)	0.130 (1.86)	0.112 (1.25)	0.00837 (0.12)	0.105* (2.19)	258
(5)	Feel connected to nature	Base	0.238* (2.05)	0.0339 (0.42)	0.0861 (1.12)	-0.0351 (-0.26)	-0.0351 (-0.14)	0.220** (3.24)	0.226** (2.60)	0.169* (2.40)	0.0351 (0.75)	258

* p<0.05, ** p<0.01, *** p<0.001

LH=Lavender Hill; Vrygr.=Vrygrond; Capric.=Capricorn; Sher. P.=Sheraton Park; Con. P.=Coniston Park; M. da Gama=Marina da Gama | MFV=Most frequently visited

Living in Muizenberg, Lakeside or Marina da Gama significantly increases (positive coefficient) the chances of visiting UGSs for either of the five most popular purposes compared to living in Lavender Hill, except for visiting the most frequently visited UGS to be together with friends and family. The only two purposes for visiting UGSs for which the chances are significantly lower when living in one of the wealthier neighbourhoods (Marina da Gama in this case) compared to Lavender Hill are to braai or picnic, and to meet new people.

Since race and neighbourhood are related to each other, the chances of visiting UGSs for all five most popular purposes is significantly lower for black African and coloured people than for white people. Chances of visiting the favourite UGS to meet new people is significantly higher for black African and coloured people than for white people. Also, the higher the income, the more likely to visit UGSs for the five most popular purposes. This is most significantly true for walking or hiking and feeling connected to nature. Chances of visiting the favourite UGS to meet new people is significantly lower for those with a monthly income between R30,001 and R75,000 compared to those with no income, and visiting the most frequently visited UGS to braai or picnic is lower for those with an income between R15,001 and R30,000, R30,001 and R75,000, and over R150,001 compared to those with no income.

All individual factors have significant differences between groups of people for at least two of the five most popular purposes of visiting UGSs. For walking or hiking, there is significant difference between people with a different employment status, household size, age, race, number of children, religion and household income. For enjoying natural beauty and views, all individual factors except for educational level show significant differences between groups. For those visiting UGSs to get a breath of fresh air, there is difference between groups of educational level, gender, employment status, household size, race, childhood opportunities, household income and nationality. For being together with friends and family, these are educational level, gender, household size, race, marital status, childhood opportunities and household income. Lastly, for feeling connected to nature, all individual factors show statistically significant differences between groups, except for nationality.

Locational factors also show significant differences between groups. Difference between garden size is significant for all five most popular purposes (positive relation, compared to no garden) except for getting a breath of fresh air. Having a district park within reach (1600 meters) is significant (positive relation compared to not having one within reach) for all five most popular purposes. Having a community park within reach (400 meters) negatively affects the chances of visiting UGSs for the five most popular purposes, compared to no community park within reach. The three higher distance groups (4.5 – 10km; 10 – 22km; over 22km: the 25 percentiles that were generated to identify the relationship between visit frequencies and distance) decrease chances of visiting the favourite UGS to get a breath of fresh air compared to the lowest distance group (below 4.5km) and increase the chances for visiting it to be together with friends and family. The three higher distance groups for the most frequently visited UGS (2 - 5km; 5 – 12.5 km; over 12.5km) significantly decrease the chance of visiting UGSs for all purposes except getting a breath of fresh air, relative to the lowest distance group (below 2km).

If the results are not skewed by whether people answered the questions face-to-face or online, then again the trio of characteristics race, household income and neighbourhood of residence is able to largely predict people's choices related to UGSs. The less wealthy are again more likely to visit UGSs for social purposes. Especially for braaiing and picnicking, this result has likely to do with the fact that people from the wealthier neighbourhoods have their own backyard, whereas people from the poorer neighbourhoods rely on the public space (A. Roberts, personal communication, June 20, 2017; F. Abbas; personal communication, June 20, 2017; I. Jones, personal communication, June 20, 2017). Indeed, for people with a garden, chances of visiting UGSs to braai or picnic, or to meet new people negatively relate to the chances to do so for people without a garden. Also, by being less exposed to UGSs in their daily lives, poorer people may be less aware of all the activities that can be undertaken in UGSs. For example, people from poorer areas are less likely to visit Kirstenbosch Gardens, due to the entrance fee of R65 per adult, and so, learn less about different animal and plant species, learn to appreciate them, and want to visit UGSs again where they can enjoy Cape Town's flora and fauna.

6. Conclusion

This research answered the question 'How do individual and locational factors relate to UGS attitudes, consisting of perceptions, preferences, and use frequencies and motives, in Cape Town?' Throughout the research, the trio of highly related variables 'neighbourhood', 'race', and 'household income' showed high significance in predicting people's UGS attitudes, with the exception for one of the components of UGS attitudes: 'perceptions of importance of UGS functions', where only race seems to play a large role. Cape Town's spatial reality is still largely influenced by Apartheid. Since UGS are a spatial issue, they cannot be seen separately from the racial and income segregation, or spatial inequality, that is still found throughout the city. The neighbourhoods that were designated for coloured people under the 1950 Group Areas Act, extending the racial segregation that already applied to black Africans to coloured people, are still overwhelmingly inhabited by coloured people, while the white areas are still predominantly white (although after the banishing of Apartheid, they have become within reach of a small group of wealthy black Africans and coloured people).

Since recreation was seen as an elitist privilege, the coloured and black African neighbourhoods were not endowed with formal UGSs. Today still, most UGS that can be found in the black African and coloured communities are undeveloped green spaces or highly neglected community parks unsuitable for recreation, while white communities are better endowed with formal and well maintained UGSs. The results of this research show indeed that the colour of one's skin – which tells us a lot about where this person likely lives, how much he or she earns, how highly educated the person is, what his or her employment status likely is, whether or not he or she has a garden, et cetera – can largely predict one's UGS attitudes.

Likely due to different historical and symbolic attachment to the land, black African and coloured people are more likely to highly value cultural functions that UGSs fulfil, while coloured people less likely rate 'inner peace and external image' highly. In line with this, highly educated people and those that visited UGSs as a child are less likely to highly value cultural functions, as well as 'economics and prosperity'. Having a garden increased the likelihood of highly valuing all functions except for culture. Even though it is mostly the more well-off people that own gardens, 'household income' and 'neighbourhood', influence perceptions of importance very little.

Neighbourhood of residency does influence the type of UGS people choose as favourite and as most frequently visited. Those living in Marina da Gama are much less likely to choose a beach or district park over a community park, compared to those living in Lavender Hill, probably because they literally live *inside* a desirable community park, being Park Island CP. When neighbourhood is held constant, higher incomes increase the chances of choosing a district park over a community park. Number of children and nationality are the only individual characteristics that influence people's choice of favourite and most frequently visited UGS. Location seems more important.

White people are significantly more likely to attribute positive as well as negative attributes to their favourite and most frequently visited UGSs. Only the positive attributes 'clean', 'green', 'different kinds of and friendly people', and 'nice water' are more likely to be assigned to the most frequently visited UGS by coloured people than by white people. 'Clean' and 'green' are more likely to be assigned to the favourite UGS by coloured than by white people. Black Africans are significantly more likely to assign no negative attributes to UGSs than white people. Also education level, gender, religion, household income and nationality significantly influence people's opinions on positive and negative attributes of UGSs. Location also matters: residents of the three wealthier neighbourhoods significantly more often find UGSs safe compared to people in Lavender Hill. The neighbourhood relates directly to 'area of district park within reach', which is higher in the wealthier neighbourhoods. The same results are found here. These results are potentially skewed because this group mostly filled out the questionnaire online, and these respondents ticked much more boxes than the face-to-face group.

Travel distance is an important and significant determinant of how often people visit UGSs: the further away the UGSs they visit, the less often they visit them. This naturally links to where people live, which again tells us a lot about their income level and race. Coloured people have significantly lower odds of visiting UGSs at least weekly. The odds of visiting UGSs at least once a week are significantly and much higher for people living in Vrygrond/Capricorn, Steenberg/Retreat, Muizenberg, Lakeside and Marina da Gama, compared to people in Lavender Hill. Linked to this, the odds of visiting UGSs at least once a week significantly increase with larger areas of district parks and nature reserves within reach. Less privileged people likely *have* to travel further to find desirable UGSs, as they are less well endowed with maintained and safe UGSs, but are also said to *want* to travel further, because of the historic connection many of these people have with, for example, Table Mountain, to which they or their parents used to live close in pre-Apartheid times.

The only purposes of visiting UGSs for which chances are higher of those living in Lavender Hill compared to Marina da Gama is to braai or picnic, or to meet new people, probably because people in wealthier areas can use their garden for social activities. People living in the wealthier neighbourhoods, with a high income, and who are white, are more likely to visit UGSs for any of the five most popular purposes (walk or hike, enjoy natural beauty or views, get a breath of fresh air, be with friends or family and feel connected to nature). Other locational factors, besides neighbourhood, are significant: the size of the garden, having a community park within reach, and distance to the favourite and most frequently visited UGSs. These results are likely skewed because of the difference between the people that filled out the questionnaire online and those answering the questions face-to-face.

So yes, UGS attitudes are largely influenced by people's individual characteristics and their location. Characteristics that did not come up as important UGS attitude influencers in general are gender, marital status and religion. Since so many of people's individual factors that do influence UGS attitudes, like income, level of education, race, employment status, often household size, size of the garden and opportunities to visit UGSs as a child, are tightly linked to people's location in Cape Town, it is unavoidable to conclude that much of people's UGS attitudes comes down to where they live.

7. Discussion

Finally, the limitations of this study will be more thoroughly explained, along with recommendations for further research. A link between the study's results and the theory will be made, and a list of policy recommendations for the City of Cape Town will be presented.

7.1 Limitations and further research

The most important limitation of the data collection methodology chosen, is related to the fact that both online and face-to-face questionnaires were used and that therefore the circumstances under which respondents answered the questions were unequal. The choice to combine the two methods was made out of time considerations. It has influenced the results of the multiple-response questions that concerned the positive and negative attributes of the visited UGSs and the purposes of visiting them. Namely, whereas online respondents were able to see all answer options, the answer options were not read to the face-to-face respondents, leading to online respondents ticking much more boxes than face-to-face respondents. This would not have mattered much when the sample of both the online and face-to-face questionnaires represented the population well. Unfortunately, the online surveys attracted mostly wealthy and white people (N = 109) from Muizenberg (N = 46), Lakeside (N =23) and Marina da Gama (N = 40) and very little black African (N = 4) or coloured people (N = 27) from Lavender Hill (N = 3), Seawinds (N = 1) or Vrygrond Capricorn (N = 3). The face-to-face survey attracted mostly coloured people (also N = 109) from Lavender Hill (N = 54), Seawinds (N = 10), Vrygrond/Capricorn (N = 21) and Steenberg/Retreat (N = 21), against only 6 white people, and only 5 from Muizenberg, 4 from Marina da Gama and none from Lakeside. Indeed, the online respondents attributed on average 9.8 positive attributes to their favourite UGS, against 4.2 for face-to-face respondents. On average, 7.0 purposes for visiting the favourite UGS were indicated by online respondents, against 3.9 for face-to-face by face-to-face respondents. The results for positive and negative attributes and purposes of visiting UGSs must therefore be handled carefully. The influence on other results is negligible, as it is unlikely that, for example, different answers are given to the question 'How often do you visit your favourite UGS?' when read from a computer screen compared to being asked in person. In future similar research, I would recommend to choose only one survey method. Since in South Africa and many other countries in the Global South illiteracy is still a problem, face-to-face surveying would be the better option.

Due to the selection of the two survey locations, Kirstenhof, Sheraton Park and Coniston Park were underrepresented by the respondents. Therefore, no conclusions for these neighbourhoods were drawn. In order to also have meaningful results for these areas, some extra respondents should have been gathered. Due to safety issues, surveying at other locations than the two selected ones was risky. The choice of survey locations also biased the respondent selection towards people that do their shopping at these areas.

Classifying people according to race is sensitive in South Africa. However, as has become clear, it cannot be ignored in studies involving spatial and/or socio-economic issues in South Africa. Even though talking about race and racial differences is common, it is this practice that tore apart families during Apartheid, because one family member had, for example, a wider nose and was therefore rehoused in black areas, while the rest of the family was moved to coloured neighbourhoods. Especially during face-to-face interviews, this formed difficulties, even though people had the option to answer 'I choose not to classify', sometimes the arbitrary choice had to be made between asking what 'population group' or 'race' the respondent thought or felt to belong to, or to fill out this question without asking (for example, if the respondent was clearly white).

People may answer the questions differently when asked in another season. The surveys were conducted in early winter when temperatures were dropping and when Cape Town was going through a severe drought. The former may have influenced the UGSs people indicated to visit and the purposes for which they do so (for example, braaiing and swimming

become less obvious at lower temperatures), while the latter may have influenced, for example, people's perceptions of importance of UGS-functions, such as 'controls, retains and filters rainwater'.

The list of 25 UGS functions may have been too long and some terms may have been confusing, despite the field tests that have been conducted. During the face-to-face surveys, people sometimes became bored after rating a few of the UGS functions, which may have caused some of them to not think through their answers well towards the end of the list. This may have influenced the results slightly. Terms as 'soil erosion' may have been difficult for some people. Even though most people asked for clarification on terms they did not understand, some people may have been shy or slightly embarrassed to ask.

The results of this research are not easily generalizable for other cities in developing countries, simply because no city has UGSs that are comparable to Cape Town's, with its unique combination of the iconic Table Mountain, surf beaches, hippo sanctuary, and flora that is found nowhere else in the world, but also because of South Africa's unique history. The methodology however can be readily replicated throughout greater Cape Town and in other South African cities. After slight adjustments in, for example, the answer options in the questionnaire (think if braaiing, which is a typical South African tradition, or asking people their religion may be inappropriate in some circumstances), the method can also be replicated in cities outside of South Africa.

Children were excluded from this research, even though they are important UGS users who arguably benefit a lot from access to them for their personal development and physical health.

7.2 Implications for theory

Traditional environmental justice research has focused on the unjust distribution of negative environmental externalities, such as toxic waste or effects of climate change, but this research shows that attention is also required to the justice of the unequal distribution of the benefits of environmental assets. By highlighting how these benefits in Cape Town are distributed according to urban economy and race, this research responds to calls from Heynen et al. (2006) to increase an understanding of the social production of urban environments. Whereas the results are discussed in terms of Cape Town's historical-spatial context, I suggest that a more thorough historical link in future research will create insights in the roots of Cape Town's spatial inequality. More concretely, I would suggest research into the way the forced removal of black African and coloured people from desirable locations to, among other places, the Cape Flats have influenced these people's and current generation's relationship with Cape Town's urban green spaces, and how this relates to the experience of white people who received more desirable lands. Simply adding a question to the questionnaire on their previous neighbourhood of residence (many respondents used to live elsewhere as a child) or the previous neighbourhood of their parents, could already give meaningful insights in the effects of historical-spatial factors on UGS attitudes.

This research has shown that, to varying extent for the various components of UGS attitudes, both individual and locational factors influence UGS attitudes. This confirms what Giles-corti (2006) writes on the socio-ecological approach: when one wants to positively influence people's UGS attitudes, in the case of his research to increase outdoor physical activity, that comprehensive interventions should target both people and place. This study also confirms the existence of distance-decay functions for the use of UGSs (Eldridge & Jones, 1991; Hanink & White, 1999; Nielsen & Hansen, 2007; Rossi et al., 2015; Schipperijn et al., 2010), as well as that with a rising income, 'higher' needs than physiological needs, safety and love and belonging can be pursued (Alfonzo, 2005; Smith et al., 1997; Tweed & Sutherland, 2007).

As was found in Santa Cruz, Bolivia, also in Cape Town access to UGSs is unequal and use patterns differ between groups. Real and perceived barriers indeed influence UGS behaviour (Wright Wendel et al., 2012). Like in Ohio and Denmark, race has a very strong predictive power when it comes to UGS attitudes (Payne et al., 2002; Schipperijn et al., 2010). In contrast to

studies elsewhere, gender and age are not important predictors of UGS attitudes in Cape Town (Payne et al., 2002; Schipperijn et al., 2010; Wright Wendel et al., 2012; Zhang et al., 2013).

7.3 Policy recommendations

To decrease spatial inequality concerning UGS use in Cape Town, entails giving all social groups equal opportunities to use UGSs for the purposes they wish to and with the frequency they please. This benefits both the social and the environmental sphere. Using UGSs has many positive effects for its users, for example for physical to psychological health. On the other hand, the City of Cape Town aims to protect the city's unique biodiversity, and having a population with positive experiences and feelings towards UGSs are more likely to defend it. It does not matter what functions of UGSs people find important or for what purposes people visit UGSs, as long as their perceptions are positive ones, their UGS experiences are positive and the activities they undertake are legal. Positive experiences make people want to come back, and make them want to conserve this space, whether it's for social, cultural, religious or environmental reason. For example, the human-made Strandfontein Sewer Works will not be developed due to its importance as a bird nesting area and many people value this and will voice against any attempts to develop it, whereas attempts to convert Princess Vlei into a shopping mall were protested and eventually prevented by the overwhelmingly coloured communities surrounding it due to its cultural value (A. Roberts, personal communication, 20 June, 2017; D. Gibbs, personal communication, 20 June, 2017). "The danger exists that I tell you how you must enjoy open space. But you might come from a totally different social group. No. As long as you value it in one form or another, job done." (D. Gibbs, personal communication, June 20, 2017).

Following Giles-corti (2006), I argue that this inequality can be reduced by targeting both place and people. On the 'place'-side, real barriers of use could be targeted, while on the 'people'-side perceived barriers could be lowered. The biggest real barrier for the use of UGSs in Cape Town is safety (A. Roberts, personal communication, 20 June, 2017; D. Gibbs, personal communication, 20 June, 2017; F. Abbas, personal communication, 21 June, 2017; I. Jones, personal communication, 20 June, 2017; L. Matschke, personal communication, 20 June, 2017; S. Granger, personal communication, 22 June, 2017). To solve safety issues while simultaneously tackling the physical barriers to using UGSs (distance or lack of desirable UGSs close by), I would recommend creating a small number (since small numbers are easier to maintain) of desirable district parks in the lower income areas of Vrygrond, Capricorn and Seawinds and employ security guards to keep them safe. One of the many undeveloped green spaces, such as St. Francolin Public Open Spaces (see Appendix 4), could be used for this. When user numbers go up, the City could reassess the need for security guards: large user numbers could keep the area safe themselves. The safety issues in Lavender Hill are out of scope of UGS provision. I would therefore not recommend creating desirable UGSs in this area until gang crime issues are being resolved, since desirable UGSs are not likely to be safe, despite security guards, and they may quickly become recruiting grounds for gangs (K. Pillay, personal communication, May 11, 2017).

Besides creating new desirable UGSs that are more easily accessible from lower income areas, accessing existing UGSs could be facilitated. Entry prices could be reduced and public transport could be improved. The current extension of the MyCiti-bus routes, which is thought of as a reliable and safe means of transport, is a step in the right direction.

Perceived entry barriers could be reduced by giving the existing UGSs in the area a more welcoming character (Giles-corti, 2006). While this will likely be met with resistance of residents, the wall that hides Marina da Gama, and therefore Park Island CP, from sight could be lowered or removed. Campaigns could be launched to attract especially the disadvantaged and less confident UGS-users to fenced UGSs like Zandvlei Estuary and Rondevlei, so that people can understand that the fence is there to protect biodiversity and keep wildlife in, instead of keeping people out (A. Roberts, personal communication, June 20, 2017; D. Gibbs, personal communication, June 20, 2017).

To decrease UGS related inequality, project groups can be made with policy makers from various departments that complement one another's expertise (D. Gibbs, personal communication, June 20, 2017). For example, policy makers of the Environmental Management Department could work together with the Law Enforcement and Security Department, the Recreation and Parks Department, the Social Development Directorate, the Urban Integration Department, and the Transport and Urban Development Authority. Project groups enable collaborative learning. For example, it is difficult for the Environmental Management Department to understand the pros and cons of employing security guards to protect UGSs, whereas the Law Enforcement and Security Department does have this knowledge.

In light of compact or infill urban development to prevent Cape Town from sprawling further, I would recommend the City of Cape Town to use many of the smaller, often littered and neglected undeveloped UGSs that can be found throughout the research area, for housing and development, while focusing on creating new and improving the quality of existing big and accessible UGSs.

Lastly, I would recommend the City of Cape Town to base all their UGS-related policies on on-the-ground research. Even conducting some site visit and observations and having some informal talks or more formal focus groups will make a difference in understanding the real situation and people's experiences. When replicating this study throughout the city, I would advise the City of Cape Town to only conduct face-to-face surveys. This way, the illiterate and those without internet connection will not be excluded, while the results cannot be influenced by a difference in data collection methods.

8. References

Alfonzo, M. A. (2005). TO WALK OR NOT TO WALK? The Hierarchy of Walking Needs. *Environment and Behavior*, *37*(6), 808–836. http://doi.org/10.1177/0013916504274016

Balram, S., & Dragićević, S. (2005). Attitudes toward urban green spaces: Integrating questionnaire survey and collaborative GIS techniques to improve attitude measurements. *Landscape and Urban Planning*, *71*(2–4), 147–162. http://doi.org/10.1016/j.landurbplan.2004.02.007

Barbosa, O., Tratalos, J. A., Armsworth, P. R., Davies, R. G., Fuller, R. A., Johnson, P., & Gaston, K. J. (2007). Who benefits from access to green space? A case study from Sheffield, UK. *Landscape and Urban Planning*, *83*(2–3), 187–195. http://doi.org/10.1016/j.landurbplan.2007.04.004

Burgess, J., Harrison, C. M., & Limb, M. (1988). People, Parks and the Urban Green: A Study of Popular Meanings and Values for Open Spaces in the City. *Urban Studies*, *25*(6), 455–473. http://doi.org/10.1080/00420988820080631

Burgess, R. (2004). The Compact City Debate: A Global Perspective. In M. Jenks & R. Burgess (Eds.), *Compact Cities: Sustainable Urban Forms for Developing Countries* (Second edi, pp. 9–24). London: Taylor & Francis.

City of Cape Town. (n.d.-a). City of Cape Town Open Data Portal.

City of Cape Town. (n.d.-b). Environmental Management Department.

City of Cape Town. (2012). *Cape Town Spatial Development Framework: Statutory Report*. Cape Town.

City Parks. (2004). *City Parks Development Policies*. Cape Town.

City Parks Department. (2015). *Parks Development Policy*. Cape Town.

Cohen, B. (2004). Urban growth in developing countries: A review of current trends and a caution regarding existing forecasts. *World Development*, *32*(1), 23–51. http://doi.org/10.1016/j.worlddev.2003.04.008

Cohen, B. (2006). Urbanization in developing countries: Current trends, future projections, and key challenges for sustainability. *Technology in Society*, *28*(1–2), 63–80. http://doi.org/10.1016/j.techsoc.2005.10.005

Coles, R., & Caserio, M. (2001). *Social Criteria for the Evaluation and Development of Urban Green Spaces*. *Response*.

Coles, R. W., & Bussey, S. C. (2000). Urban forest landscapes in the UK – progressing the social agenda. *Landscape Urban Plan*, *52*, 181–188.

Cornes, R., & Sandler, T. (1996). *The theory of externalities, public goods and club goods*. Cambridge: Cambridge University Press.

Cvejic, R., Eler, K., Pintar, M., Zeleznikar, S., Haase, D., Kabisch, N., & Strohbach, M. (2017). *A Typology of Urban Green Spaces, Eco-System Services Provision Services and Demands* (Vol. 7). Copenhagen.

Delft, T. (n.d.). Developing smart eco cities in mega city regions.

Department of Sport Recreation and Amenities. (2015). *Sport and Recreation Policy Framework*. Cape Town.

Dioum, B. (1986). *Speech, no name*. New Delhi.

Eldridge, J. D., & Jones, J. P. (1991). Warped space: a geography of distance decay. *The Professional Geographer*, *43*, 500–511.

Environmental Resource Management Department. (2010). *Nature Reserves: a network of amazing biodiversity*. Cape Town.

Florida, R. (2005). *Cities and the Creative Class*. New York: Routledge.

Galloway, G. (2002). Psychographic segmentation of park visitor markets: evidence for the utility of sensation seeking. *Tourism Management*, *23*, 581–596.

Gidlöf-Gunnarsson, A., & Öhrström, E. (2007). Noise and well-being in urban residential environments: The potential role of perceived availability to nearby green areas. *Landscape and Urban Planning*, *83*(2–3), 115–126. http://doi.org/10.1016/j.landurbplan.2007.03.003

Giles-corti, B. (2006). People or places : What should be the target ? http://doi.org/10.1016/j.jsams.2006.06.021
Giles-Corti, B., Broomhall, M. H., Knuiman, M., Collins, C., Douglas, K., & Ng, K. (2005). How important is distance to, attractiveness, and size of public open space? *American Journal of Preventive Medicine*, *28*(2), 169–176.
Groenewegen, P. P., den Berg, A. E., de Vries, S., & Verheij, R. A. (2006). Vitamin G: effects of green space on health, well-being, and social safety. *BMC Public Health*, *6*, 1–9. http://doi.org/10.1186/1471-2458-6-149
Hanink, D. M., & White, K. (1999). Distance effects in the demand for wildland recreation services: the case of national parks in the United States. *Environment and Planning A*, *31*(477–492).
Hardoy, J. E., Cairncross, S., & Satterthwaite, D. (1990). *The Poor Die Young: Housing and Health in Third World Cities*. London: Earthscan.
Herzele, V., & Wiedeman, T. (2003). A Monitoring Tool for the Provision for Accessible and Attractive Green Spaces," Elsevier Sciences. *Landscape and Urban Planning*, *63*(2), 109–126. http://doi.org/10.1016/S0169-2046(02)00192-5
Heynen, N., Perkins, H. A., & Roy, P. (2006). The Political Ecology of Uneven Urban Green Space: The Impact of Political Economy on Race and Ethnicity in Producing Environmental Inequality in Milwaukee. *Urban Affairs Review*, *42*(1), 3–25.
Jackson, J., & Davison, A. (2016). Natural Open Space Plan (NOSP). City of Cape Town.
James, P., Tzoulas, K., Adams, M. D., Barber, A., Box, J., Breuste, J., … Ward Thompson, C. (2009). Towards an integrated understanding of green space in the European built environment. *Urban Forestry and Urban Greening*, *8*(2), 65–75. http://doi.org/10.1016/j.ufug.2009.02.001
Jenks, M. (2004). Sustainable Urban Form in Developing Countries? In M. Jenks & R. Burgess (Eds.), *Compact Cities: Sustainable Urban Forms for Developing Countries* (Second edi, pp. 1–6). London: Taylor & Francis.
Jim, C. Y., & Chen, W. Y. (2006). Perception and attitude of residents toward urban green spaces in Guangzhou (China). *Environmental Management*, *38*(3), 338–349. http://doi.org/10.1007/s00267-005-0166-6
Jim, C. Y., & Shan, X. (2013). Socioeconomic effect on perception of urban green spaces in Guangzhou, China. *Cities*, *31*, 123–131. http://doi.org/10.1016/j.cities.2012.06.017
Kennedy, C., Pincetl, S., & Bunje, P. (2011). The study of urban metabolism and its applications to urban planning and design. *Environmental Pollution*, *159*(8–9), 1965–1973. http://doi.org/10.1016/j.envpol.2010.10.022
Laros, M. (2007). *City of Cape Town: The Identification and Prioritisation of a Biodiversity Network for the City of Cape Town*. Cape Town.
Larsen, R., & Warne, R. T. (2010). Estimating confidence intervals for eigenvalues in exploratory factor analysis. *Behavior Research Methods*, *42*, 871–876. http://doi.org/doi:10.3758/BRM.42.3.871
Lemanski, C. (2007). Global Cities in the South : Deepening social and spatial polarisation in Cape Town, *24*(6), 448–461. http://doi.org/10.1016/j.cities.2007.01.011
Lindsey, G., Maraj, M., & Kuan, S. (2001). Access, equity, and urban greenways: An exploratory investigation. *Professional Geographer*, *53*(3), 332–346.
Lo, A. Y. H., & Jim, C. Y. (2010). Differential community effects on perception and use of urban greenspaces. *Cities*, *27*(6), 430–442. http://doi.org/10.1016/j.cities.2010.07.001
Lobao, L., & Saenz, R. (2002). Spatial Inequality and Diversity as an Emerging Research Area. *Rural Sociology*, *67*(4), 497–511.
Lohnert, B., Oldfield, S., & Parnell, S. (2017). POST-APARTHEID SOCIAL POLARISATIONS : THE CREATION OF SUB-URBAN IDENTITIES IN CAPE, *6245*(August). http://doi.org/10.1080/03736245.1998.9713650
Maas, J., Verheij, R. A., Groenewegen, P. P., De Vries, S., & Spreeuwenberg, P. (2006). Green space, urbanity, and health: How strong is the relation? *Journal of Epidemiology and Community Health*, *60*, 587–592.

Mandela, N. (1994). *Long Walk to Freedom*. Little Brown and Company.
Mcnutt, P. (1999). P UBLIC G OODS AND C LUB G OODS, 927–951.
Ministry for Provincial Affairs and Constitutional Development. (1998). *The White Paper and Local Government*. Pretoria.
Nielsen, T. S., & Hansen, K. B. (2007). Do green areas affect health ? Results from a Danish survey on the use of green areas and health indicators. *Health & Place*, *13*, 839–850. http://doi.org/10.1016/j.healthplace.2007.02.001
Payne, L. L., Mowen, A. J., & Orsega-Smith, E. (2002). An Examination of Park Preferences and Behaviors Among Urban Residents: The Role of Residential Location, Race, and Age. *Leisure Sciences*, *24*, 181–198.
Qureshi, S., Breuste, J. H., & Jim, C. Y. (2013). Differential community and the perception of urban green spaces and their contents in the megacity of Karachi, Pakistan. *Urban Ecosystems*, *16*(4), 853–870. http://doi.org/10.1007/s11252-012-0285-9
Rossi, S. D., Byrne, J. A., & Pickering, C. M. (2015). The role of distance in peri-urban national park use : Who visits them and how far do they travel ? *Applied Geography*, *63*, 77–88. http://doi.org/10.1016/j.apgeog.2015.06.008
Rupprecht, C. D. D., Byrne, J. A., Ueda, H., & Lo, A. Y. (2015). "It"s real, not fake like a park': Residents' perception and use of informal urban green-space in Brisbane, Australia and Sapporo, Japan. *Landscape and Urban Planning*, *143*, 205–218. http://doi.org/10.1016/j.landurbplan.2015.07.003
Sanders, I. (2008). Complex systems thinking and new urbanism. *New Urbanism and beyond: Designing Cities for the Future Rizzoli, New York*, 275–279.
Sanesi, S., & Chiarello, F. (2006). Residents and urban green spaces: the case of Bari. *Urban Forestry and Urban Greening*, *4*, 125–134.
Sasidharan, V., Willits, F., & Godbey, G. (2005). Cultural differences in urban recreation patterns: an examination of park usage and activity participation across six population subgroups. *Managing Leisure*, *10*, 19–38.
Schipperijn, J., Ekholm, O., Stigsdotter, U. K., Toftager, M., Bentsen, P., Kamper-Jørgensen, F., & Randrup, T. B. (2010). Factors influencing the use of green space: Results from a Danish national representative survey. *Landscape and Urban Planning*, *95*(3), 130–137. http://doi.org/10.1016/j.landurbplan.2009.12.010
Schöpfer, E., Lang, S., & Blaschke, T. (2004). A" green index" incorporating remote sensing and citizen's perception of green space. *ISPRS Journal of Photogrammetry and Remote Sensing*, 6. Retrieved from http://www.isprs.org/proceedings/XXXVI/8-W27/schoepfer.pdf
Shackleton, C. M., & Blair, A. (2013). Perceptions and use of public green space is influenced by its relative abundance in two small towns in South Africa. *Landscape and Urban Planning*, *113*, 104–112. http://doi.org/10.1016/j.landurbplan.2013.01.011
Shackleton, S., Chinyimba, A., Hebinck, P., Shackleton, C., & Kaoma, H. (2015). Landscape and Urban Planning Multiple benefits and values of trees in urban landscapes in two towns in northern South Africa. *Landscape and Urban Planning*, *136*, 76–86. http://doi.org/10.1016/j.landurbplan.2014.12.004
Slater, D. (1975). Underdevelopment and Spatial Inequality. *Progress in Planning*, *4*(2), 97–167.
Smith, T., Nelischer, M., & Perkins, N. (1997). Quality of an urban community : a framework for understanding the relationship between quality and physical form. *Landscape and Urban Planning*, *39*, 229–241.
Strategic Development Information and GIS Department. (2012). *2011 Census - Cape Town*. Cape Town.
Swyngedouw, E., & Heynen, N. C. (2003). Urban Political Ecology , Justice and the Politics of Scale Urban Political Ecology , Justice and the Politics of Scale.
Thompson, C. W., & Aspinall, P. A. (2011). Natural Environments and their Impact on Activity , Health , and Quality of Life, *3*(3), 230–260. http://doi.org/10.1111/j.1758-0854.2011.01053.x
Tinsley, H. E. A., Tinseley, D. J., & Croskeys, C. E. (2002). No Park usage, social milieu, and psychosocial benefits of park use reported by older urban park users from four ethnic

groups. *Leisure Sciences*, *24*, 199–218.
Turok, I. (2001). Persistent Polarisation Post- Apartheid ? Progress towards Urban Integration in Cape Town, *38*(13), 2349–2377.
Tweed, C., & Sutherland, M. (2007). Built cultural heritage and sustainable urban development. *Landscape and Urban Planning*, *83*, 62–69. http://doi.org/10.1016/j.landurbplan.2007.05.008
Tyrväinen, L., Mäkinen, K., & Schipperijn, J. (2007). Tools for mapping social values of urban woodlands and other green areas. *Landscape and Urban Planning*, *79*(1), 5–19. http://doi.org/10.1016/j.landurbplan.2006.03.003
United Nations. (n.d.). Sustainable Development Goal 11. Retrieved August 8, 2017, from https://sustainabledevelopment.un.org/sdg11
United Nations. (2017). *New Urban Agenda*. Quito.
Van den Berg, A. E., & Koole, S. L. (2006). New wilderness in The Netherlands: an investigation of visual preferences for nature development landscapes. *Landscape and Urban Planning*, *78*, 362–372.
Ward, C. D., Parker, C. M., & Shackleton, C. M. (2010). The use and appreciation of botanical gardens as urban green spaces in South Africa. *Urban Forestry and Urban Greening*, *9*(1), 49–55. http://doi.org/10.1016/j.ufug.2009.11.001
Wilkinson, P. (2000). City profile Cape Town, *17*(3), 195–205.
Wright Wendel, H. E., Zarger, R. K., & Mihelcic, J. R. (2012). Accessibility and usability: Green space preferences, perceptions, and barriers in a rapidly urbanizing city in Latin America. *Landscape and Urban Planning*, *107*(3), 272–282. http://doi.org/10.1016/j.landurbplan.2012.06.003
Yilmaz, S., Zengin, M., & Demircioglu Yildiz, N. (2007). Determination of user profile at city parks: a sample from Turkey. *Building and Environment*, *42*, 2325–2332.
Zhang, H., Chen, B., Sun, Z., & Bao, Z. (2013). Landscape perception and recreation needs in urban green space in Fuyang, Hangzhou, China. *Urban Forestry and Urban Greening*, *12*(1), 44–52. http://doi.org/10.1016/j.ufug.2012.11.001
Zhou, X., & Rana, M. M. P. (2012). Social benefits of urban green space: A conceptual framework of valuation and accessibility measurements. *Management of Environmental Quality: An International Journal*, *23*(2), 173–189. http://doi.org/10.1108/14777831211204921
Zonneveld, W. (1991). *Conceptvorming in de Ruimtelijke Planning: Patronen en Processen*. Amsterdam.

Appendix 1: Field notes survey-meetings

Meeting 1: March 16th, Dr. Anthony Roberts, CEO of CTEET and Joanne Jackson, Head of Natural Space Systems of the City of Cape Town

- Introduction of CTEET

CTEET works together with CCT on environm. educ. programs such as Birdathon. CTEET focusses on getting children in touch with nature.

- Location for case study

Large fire in Imizamo Yethu, so Hout Bay may not be good option anymore. CTEET works a lot on the Cape Flats. I could take this into account when choosing location for it to be of benefit for CTEET. Joanne worked on Cape Flats as well in Source to Sea project. More interesting mix of UGS, and also has 3 income levels, different ethnicities.

- Surveying on location

Unsafe to go door-to-door. Surveys sent by post will not be returned. Surveying in 'neutral' places is the safest and most rewarding option. Choose different neutral spaces throughout area to limit bias.

- Staff to help surveying

CTEET may be able to provide staff to help surveying

Meeting 2: March 17th, Stephen Granger, Joanne Jackson, Waarith Abrahams, Rebekah …

- Program NOS – Natural Open Space management / green infrastructure plan. NOSS → Natural Open Space System
- Besides biodiversity management, green open space is important (they overlap, see Planet Earth II) and it needs to be activated, otherwise green space becomes perceived as bad space.

- Definition/vision of urban green space

See slides – add to paper. Also explain in survey what UGS exactly is.

- Location choice:

Follow the ward-boundaries of the CCT, because there is ward-specific data available. Wards 71, 64, 68 roughly coincide with Source to Sea area. Consider this area!

- Additional negative functions (survey)

Decreases urban density / Increases urban sprawl
Risk of natural hazards like flooding

- Additional functions of UGS (survey)

Attracting business / economic benefit
Providing water / ground water recharge / water purification
Habitat provision
Aesthetics (tourism)
Recreational (actual/potential)
Spiritual/cultural value

- Additional characteristics of UGS (survey)

Accessible or inaccessible
Spiritual/cultural value
Place to see wildlife

- Spatial analysis

One urban green space is one number on the map? Or cutting up large UGS into smaller pieces?

Meeting 3: March 24th, Joanne Jackson

- MapHome

Bigger streets in bigger font, smaller streets in smaller font

- Choosing survey location

Drive around with Joanne to check whether pre-selected locations are fine (explore through Google Maps – already some indicated potential spaces drawn on map during the meeting). Make map of all potential locations and bring. Tip: City Health Clinics (bias?) and Blue Route.

- MapGreenSpaceDetail

Drive around with CTEET staff to check whether map is correct: See whether all UGS on map exist in real life / if there are UGS not shown on the map. Don't go alone; not safe, even by car (gangs in Lavender Hill)

- Survey

First ask where they live before starting
People will ask question one with some type of UGS in their mind, which is probably not, for example, cemetery or road verge. Think about this. Does it matter? Not really, it truly shows people's perceptions of UGS, for ex. they are not important for embellishing roads, but rather for safeguarding biodiversity.

- Analysing data

Look more into how multiple multivariate regression analysis works

Additionally: informal conversations with peers

- Dealing with non-response

Also make online survey and give a card when people have no time to answer on the spot.

- Number of surveys

300 would be easily doable.

Email feedback 1: Stephen Granger

Survey: For my study Sustainable Development at Utrecht University, I am conducting a research into the manner in which different people ***perceive and use the urban green spaces*** *in Cape Town. I hope that eventually, this research will help the City of Cape Town to manage the green spaces according to the residents' wishes.*

Explain here what is and what isn't considered as an urban green space.

The study consists of three exercises and a handful of questions about your background and will take about ***5 minutes****. If there is any question you prefer not to answer, that is no problem.*

The survey is completely anonymous. You do not have to reveal your identity, and the survey results will only be analysed in an aggregated manner.

Thank you very much for your participation

Stephen: Just checking – I assume you will give a short explanation here… You are not asking the interview to explain? I would hope the former! I also suggest you might provide a brief outline on the purpose of your study, beyond just what is considered an urban green space.

Survey: k. Provides environmental benefits (filters air, produces oxygen, captures carbon, controls rainwater, mitigates climate change)
Stephen: Improves water quality (?) but see below
Survey: o. Presents wildlife habitat
Stephen: Suggest "provides" rather than "presents"

Survey: s. Allows performance of traditions or religion
Stephen: Suggest "practice" rather than "performance"

Survey: u. Provides (maintenance) jobs
Stephen*:* Suggest use "green" jobs – there could be a range of jobs offered, not simply maintenance, for example, safety, tour guides, transport facilitation etc

Survey: x. Provides water
Stephen: Perhaps "provides access to water" ? Or perhaps also "improves water quality" (perhaps add "through bio-remediation" …)

Survey: c. Occupy space useful for buildings and housing – i.e. induces urban sprawl|
Stephen: Suggest "promote" rather than "induces"

Survey: f. Looks filthy and disorderly
Stephen: Disorderly

Survey: g. Prone to fire, flooding and other hazards
Stephen: Suggest additional - (If applicable) deceases property value

Survey: Question 3: What urban green spaces do you visit? Please write down the number of the urban green space that corresponds to the number indicated on the map.
Stephen: I assume you are simply referring to those green spaces within your study area? Even though this is almost clear from the table (that you are just asking about those spaces on the map, you will likely find people wanting to include Table Mountain and Tokai Forest eg. Best you be quite explicit up front.
Nina: No, I'm going to include one map with all urban green spaces in the selected area and one map of CT in which only larger, well-known and highly esteemed UGS are shows for which people are willing to travel further, like Table Mountain and Tokai Forest. I am interested in how far people are willing to travel for such spaces and why they feel that these spaces are special, but also what kinds of people do so. This is not possible when I exclude all green areas outside of the chosen wards from this research.

Survey: What attributes correspond to this space?
Nina: I am not sure what to do with this question. I could ask for people's reason to choose this specific green space to visit (for ex.: close to home, beautiful landscape, valuable nature site), but I could also ask people what attributes they think corresponding with this place (likewise, close to home, beautiful landscape, valuable nature site, etc.). The answers to these questions will likely be different; although one may find it a safe place, this may not be the reason for choosing this space but merely because it's close to home. What do you think is more important to find out?
Stephen: My view is to simply ask why people use the space. Otherwise you are asking them to speculate, which could be unhelpful to your study. Always best to know that you are getting real and accurate answers from people, even if it may not be 100% what you are trying to find out.

Survey: unaesthetic
Stephen: visually unappealing

Survey: This way I can determine if there are certain groups of people, for example seniors with an average income, that perceive and use urban green spaces in specific manners.
Stephen: Always good to give two egs! So perhaps add "or school goers looking for play area" ….or something else

Survey: What is your highest education completed? Primary school foundation phase, primary school intermediate phase, etc. etc.
Nina: Not sure if this list is comprehensive or too many options
Stephen: I think too many options! I would simply give university undergraduate and university postgraduate. Also check terminology for primary and high school – perhaps there is formal terminology and then something else which might be better understood – you could include both.

Survey: How would you describe yourself in terms of population group?
Nina: Maybe leave this question out and interpretation by surveyor, although this may be prone to mistakes. I would prefer leaving it in
Stephen: I agree to leave it in. There is no problem if the interviewee is completing the form him or herself (best option). If you are going through it with them, this could prove potentially embarrassing

Survey: What is your household income per month in rand? No income; 1-400; 401 – 800; 801 – 1600; etc. etc.
Nina: I got these income groups from the 2011 South African census questionnaire. Would it be better to combine some of the groups? May result in less significant results
Stephen: Our census is non-senses! I think these are very confusing categories. I would have fewer and suggest: less than 1000, 1k- 10k, 11k – 50k, 51k – 100k, 101 – 250k, 251 – 500k, more than 500k.
However, suggest you get further advice on this.

Survey: Do you have your own garden? No; yes < 0,1ha; yes, 0,1 – 0,5ha; etc. etc.
Stephen: I think people might struggle with these dimensions. Suggest include square metres as well and also the approx. length and width of one.
Eg 0.1ha or 1000 m2 (approx. 50m long and 20 m wide)
But here I think you need smaller sizes, as many low income units might have small gardens, even 5m x 3m or 15 m2
So you perhaps need a rethink here. Unlikely any bigger than 1 ha (over 2 acres) in this area.

Nina: Should I add a list of preferences for urban green spaces? For ex.: lots of trees, lots of benches, varied, sports facilities, in natural state, peaceful and quite, busy and lively.
The survey may become too long.
Another way to do this is to end with the question: Describe the perfect urban green space for you. Then people can make it as long or short as they want – word count for ex. could indicate what people value most
Stephen: I would go with the perfect green space to end. But keep in the child question. Perhaps you could ask if they regularly visited GOS as a child – almost all would have had some experience.

Email feedback 2: Joanne Jackson
Joanne: List of suggestions to rephrase sentences / correct spelling mistakes or vague phrasing.

Joanne: Be useful to run a test on some of the other interns to get a good sense of time, and if the questionnaire works well or is confusing to them. This will allow for refinement.

Survey: If there is any question you prefer not to answer, that's no problem
Joanne: If there is any question you prefer not to answer, you may leave it out

Survey: Question 1: I would like to find out to what extent you think the various functions of urban green spaces are important to you and to the city. Check the box that fits best to how you feel.

Joanne: Should we perhaps ask them select from a list of different types of typologies select what they regard as urban green space : be interesting to see what people think are green spaces. Then to go and see what they think they are there values/ functions?

Survey: Urban green spaces are all areas within the city that are predominantly covered in vegetation in any form. This includes both so-called primary green spaces (for ex. nature reserves, river corridors and parks) and green spaces in which nature is secondary to the function of the area (for ex. Sports fields and cemeteries).Also natural space associated with school and institutions, and coastal zones are seen as urban green spaces.
Joanne: I'm wondering the 'value' of the data you will extract if all types of spaces are aggregated. What do you think of separating out primary green space from secondary green space?

Survey: Tick as many boxes as you like. If you visit more than 6 green spaces per year, let's only discuss the ones you visit most frequently.
Joanne: Perhaps you can then ask them to list the 4 spaces they visit most frequently, and 2 spaces that are their favourite or most important /valuable to them. For example, they may visit their local park most often, as convenient, but their favourite/ most important UGS is GreenPoint Urban Park,, but only go once a year due to cost.

Survey: Purpose of visit
Joanne: Suggest also include: to braai; to picnic (2 points)

Survey: Are there any negative attributes?
Joanne: Maybe include Vandalised / neglected infrastructure; neglected/ not well maintained natural spaces (in place of second option) + opening times difficult/ restrictive. Not sure what you are wanting from 'unpleasant' . Perhaps unpleasant could related to 'undesirable activities' occurring in the space, such as drugs, gangsters.

Survey: Variable
Joanne: Variable? Not sure what you mean

Survey: To find or grow food/flowers
Joanne: Is illegal to harvest flowers, be interesting to see if/ where people do

Survey: Why do you choose this space specifically?
Joanne: Perhaps add something like 'positive childhood associations/memories'

Survey: Could you indicate on the map that is included where you live?
Joanne: I'm assuming this could be on both the 'local' as well as broader city map. If you're only wanting to interview people residing within the specific area, you perhaps need to show them the map upfront to determine 'eligibility' for the survey, prior to undertaking the survey. If surveying at the shopping centre near the beach in Muizenberg, you may be people from outside the area.

Joanne: Some people really battle when it comes to finding features on map; you could also ask what road / suburb they live .
Survey: What is your highest education completed?
Joanne: I would suggest using
Primary School (Grade 1- 7)
Secondary School (grade 8 – 10)
Secondary School (grade 11-12)
National Diploma
Bachelor's degree
Master's degree
Doctorate
Other….

Survey: What is your occupation?
Joanne: Suggest also include Self Employed

Survey: What is your household income per month in rand?
Joanne: These are quite specific. Perhaps 0-3500; 3501-7500; 7501-15000; 15001 – 30 000; 30001 – 75 000; 75 001 – 150 000; 150 01 – 300 000; 300 001 – 500 000; > 500 001 . 0-3500 qualifies a person for a subsidy house, and 3500 – 15 000 regarded as the housing gap market, with a differentiate coming in at 7500 - see link I sent you to press article.

Survey: Did you have the opportunity to visit urban green spaces when you were a child?
Joanne: I think it would also be useful to ask if their children, if they have had an opportunity to go on an environmental education experience in the city and if so, was it with CTEET, the City or other another group.

Appendix 2: Questionnaire (final version)

Universiteit Utrecht

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD
Making progress possible. Together.

Questionnaire on urban green spaces in Cape Town

For my degree Sustainable Development at Utrecht University, the Netherlands, I am conducting research into how different people **feel about and use the urban green spaces** in Cape Town. The study will inform the **City of Cape Town.**

The study is six pages long, and will take about **10 minutes**. If there is any question you prefer not to answer, you may skip it. Through a lucky draw, three participants will be awarded with a **voucher** worth R400 for dinner for two at Live Bait in Muizenberg.

The survey is completely **anonymous**. You are not asked to reveal your identity and the results will only be analysed in a summed manner – thus not based on single questionnaires.

Thank you very much for your participation!

Nina van Rijn

If you have any questions related to this study, please contact me on:
N.vanRijn@students.uu.nl

Definition of Urban Green Space
Urban green spaces are all areas within the city that are predominantly covered in vegetation in any form. This includes spaces where nature is the primary function (e.g. nature reserves, river corridors and parks, but also beaches) and green spaces in which nature is secondary to the function of the area (e.g. sports fields and cemeteries). Also natural space associated with school and institutions are seen as urban green spaces.

Section 1: **Please describe what your perfect urban green space would look like** – *You may use your imagination; the question is not about an actually existing space.*

Section 2: Urban green spaces can provide various functions. **How important are the functions mentioned below for you?** Read the definition of urban green space on the front page before you start. **Tick the box** that fits best to how you feel – for every provided function you need to check one of the six boxes.

	Very important	Important	Neutral	Un-important	Very unimportant	Don't know / No answer
a. Provides area for children to play	☐	☐	☐	☐	☐	☐
b. Promotes health and wellbeing	☐	☐	☐	☐	☐	☐
c. Allows practice of religion and traditions	☐	☐	☐	☐	☐	☐
d. Provides area to meet up with friends and family	☐	☐	☐	☐	☐	☐
e. Provides animal and plant habitat and conservation	☐	☐	☐	☐	☐	☐
f. Prevents the soil from washing away	☐	☐	☐	☐	☐	☐
g. Has symbolic identity	☐	☐	☐	☐	☐	☐
h. Provides environmental benefits (captures carbon, filters air, mitigates climate change)	☐	☐	☐	☐	☐	☐
i. Attracts business and provides economic benefits	☐	☐	☐	☐	☐	☐
j. (If applicable) increases property value	☐	☐	☐	☐	☐	☐
k. Provides area to meet new people	☐	☐	☐	☐	☐	☐
l. Provides space for festivities and events	☐	☐	☐	☐	☐	☐
m. Provides area for resting and passing time	☐	☐	☐	☐	☐	☐
n. Controls, retains and filters rainwater (prevents rainwater from flooding the streets)	☐	☐	☐	☐	☐	☐
o. Improves the community image	☐	☐	☐	☐	☐	☐
p. Provides refuge from stressful environment	☐	☐	☐	☐	☐	☐
q. Makes the area more beautiful	☐	☐	☐	☐	☐	☐
r. Offers shade and cooling	☐	☐	☐	☐	☐	☐
s. Encourages and offers space for outdoor physical activity	☐	☐	☐	☐	☐	☐
t. Allows learning about nature and environment	☐	☐	☐	☐	☐	☐

	Very important	Important	Neutral	Un-important	Very unimportant	Don't know / No answer
u. Increases safety due to more "eyes on the street"	☐	☐	☐	☐	☐	☐
v. Provides jobs (maintenance, tour guides, transport, security, etc.)	☐	☐	☐	☐	☐	☐
w. Provides space for finding and growing food and flowers	☐	☐	☐	☐	☐	☐
x. Attracts tourism	☐	☐	☐	☐	☐	☐
y. Reduces noise and light pollution	☐	☐	☐	☐	☐	☐

Section 3: To what extent do you agree that urban green spaces in Cape Town have any of these **negative attributes?**

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know / No answer
a. Create dark and hiding places	☐	☐	☐	☐	☐	☐
b. Induce criminality and vandalism	☐	☐	☐	☐	☐	☐
c. Occupy space that would be more useful for buildings and housing	☐	☐	☐	☐	☐	☐
d. Encourage littering	☐	☐	☐	☐	☐	☐
e. Increase nuisance due to noisy users	☐	☐	☐	☐	☐	☐
f. Look filthy and disorderly	☐	☐	☐	☐	☐	☐
g. Prone to fire, flooding and other hazards	☐	☐	☐	☐	☐	☐
h. (If applicable) decreases property value	☐	☐	☐	☐	☐	☐

Section 4: Favourite urban green space

Map 1: shows the larger urban green spaces and beaches of Cape Town.
Map 2: shows a more detailed view of all urban green spaces (also small and 'informal' ones) in your area.

a. What is the name of your favourite urban green space in Cape Town? If you don't know the name, the big plastic maps may help you.

……..

b. How often do you visit your favourite urban green space?

… times per week or
… times per month or
… times per year

c. How long do you generally stay at this green space?

……

d. How do you travel to this space? *Tick as many boxes as applicable*

☐ On foot ☐ Car ☐ Bus ☐ Mini-bus/Taxi ☐ Cab/uber
☐ Metro/train ☐ Bicycle ☐ Other, namely: ……

e. For what purposes do you visit this particular space? *Tick as many boxes as you like*

☐ Hike/walk ☐ Jog ☐ Water sports ☐ Other sports: ……..
☐ Photograph ☐ I work there ☐ Have lunch outside ☐ Braai or picnic
☐ Enjoy natural beauty/views ☐ Be with friends/family ☐ Grow or find food/ flowers
☐ Meet new people ☐ See wildlife/birds/plants ☐ Let the children play outside
☐ Walk the dog ☐ Get breath of fresh air ☐ Feel connected to nature
☐ Find shade and cooling ☐ For festivities or events ☐ Learn about nature and environment
☐ Practice religion or tradition ☐ Relax/get away from stressful environment
☐ Other: ……

f. What positive attributes does this space have to you? *Tick as many boxes as you like*

☐ Close to home ☐ Valuable nature site ☐ Free/cheap entrance
☐ Multifunctional ☐ In natural state ☐ Easily accessible
☐ Nice atmosphere ☐ Space and freedom ☐ Convenient opening hours
☐ Peace and tranquillity ☐ Opportunity for activities ☐ Beautiful landscape/views
☐ Safe ☐ Good facilities ☐ Chance to see wildlife/ birds/plants
☐ Open/uncluttered/visible space ☐ Positive childhood associations
☐ History, culture, symbolic identity ☐ Other: ……

g. And what negative attributes? *Tick as many boxes as you like*

☐ Far from home ☐ Lack of facilities ☐ Scary/unsafe/ undesirable activities taking place
☐ Noisy or unpeaceful ☐ Crowded ☐ Difficult to access ☐ Expensive
☐ Dark/hiding places ☐ Not in natural state ☐ Visually unappealing ☐ Little different functions
☐ Unused/deserted ☐ Neglected natural space ☐ Neglected facilities ☐ Unpleasant atmosphere
☐ Lack of historical/cultural/ symbolic identity ☐ Lack of opportunities for activities
☐ Inconvenient opening hours
☐ Other: ……

Section 5: Most visited urban green space

a. Is your favourite urban green space, the one you have been discussing on the previous page, **also the urban green space you visit most?**

☐ Yes it is, my favourite space is the one I visit most often *(if yes, you may skip this page - please continue with question 6 on the next page)*
☐ No, there is another space I visit more often than my favourite space *(please continue answering the questions on this page)*

b. What is the name of your most visited urban green space in Cape Town? If you don't know the name, the big plastic maps may help you.

……

c. How often do you visit this urban green space?

… times per week or
… times per month or
… times per year

d. How long do you generally stay at this green space?

……

e. How do you travel to this space? *Tick as many boxes as applicable*

☐ On foot ☐ Car ☐ Bus ☐ Mini-bus ☐ Cab/uber
☐ Metro/train ☐ Bicycle ☐ Other, namely: ……

f. For what purposes do you visit this particular space? *Tick as many boxes as applicable*

☐ Hike/walk ☐ Jog ☐ Water sports ☐ Other sports: ……..
☐ Photograph ☐ I work there ☐ Have lunch outside ☐ Braai or picnic
☐ Enjoy natural beauty/views ☐ Be with friends/family ☐ Grow or find food/ flowers
☐ Meet new people ☐ See wildlife/birds/plants ☐ Let the children play outside
☐ Walk the dog ☐ Get breath of fresh air ☐ Feel connected to nature
☐ Find shade and cooling ☐ For festivities or events ☐ Learn about nature and environment
☐ To practice religion or tradition ☐ Relax/get away from stressful environment
☐ Other: ……

g. What positive attributes does this space have to you? *Tick as many boxes as you like*

☐ Close to home ☐ Valuable nature site ☐ Free/cheap entrance
☐ Multifunctional ☐ In natural state ☐ Easily accessible
☐ Nice atmosphere ☐ Space and freedom ☐ Convenient opening hours
☐ Peace and tranquillity ☐ Opportunity for activities ☐ Beautiful landscape/views
☐ Safe ☐ Good facilities ☐ Chance to see wildlife/ birds/plants
☐ Open/uncluttered/visible space ☐ Positive childhood associations
☐ History, culture, symbolic identity ☐ Other: ……

h. And what negative attributes? *Tick as many boxes as you like*

☐ Far from home ☐ Lack of facilities ☐ Scary/unsafe/ undesirable activities taking place
☐ Noisy or unpeaceful ☐ Crowded ☐ Difficult to access ☐ Expensive
☐ Dark/hiding places ☐ Not in natural state ☐ Visually unappealing ☐ Little different functions
☐ Unused/deserted ☐ Neglected natural space ☐ Neglected facilities ☐ Unpleasant atmosphere
☐ Lack of historical/cultural/ symbolic identity ☐ Lack of opportunities for activities
☐ Inconvenient opening hours
☐ Other: ……

Section 6:

a. How often do you visit <u>other</u> urban green spaces in Cape Town (thus excluding those you have mentioned above)? If possible, write the names of these other spaces in the box

… times per week or
… times per month or
… times per year

b. What do you think of the supply or amount of urban green spaces in Cape Town?

☐ Excellent ☐ Good ☐ Average ☐ Fair ☐ Bad ☐ Don't know/no answer

c. What do you think of the general state of urban green spaces in Cape Town?

☐ Excellent ☐ Good ☐ Average ☐ Fair ☐ Bad ☐ Don't know/no answer

---

Section 7: Background information
Almost done!

Based on the questions on you background below, I will determine if there are certain groups of people, for example seniors with an average income or students without their own garden, that feel about and use urban green spaces in specific manners.

a. I would like to calculate for every respondent the travel distance to various green spaces. Could you please either write down your address or, when uncomfortable with this, indicate the location of your home on map number 3 (after the next page).

Address: ……..

b. What is your highest education completed?

☐ Primary school (Grade 1-7) ☐ National diploma ☐ Doctorate
☐ Secondary school (Grade 8-10) ☐ Bachelor's degree ☐ Other: …….
☐ Secondary school (Grade 11-12) ☐ Master's degree

c. What is your gender?

☐ Male ☐ Female ☐ Prefer not to say ☐ Other

d. What is your employment situation?

☐ Employed ☐ Studying ☐ Housewife ☐ Other: ……
☐ Self-employed ☐ Unemployed ☐ Retired

e. How many people are there in your household? ……

f. How old are you? ……..

g. What is your country of birth? ……

h. How would you describe yourself in terms of population group?

☐ Black African ☐ Coloured ☐ Indian ☐ Other Asian ☐ White
☐ I choose not to classify ☐ Other: …

i. What is your marital status?

☐ Married ☐ Living together ☐ Widower/widow ☐ Separated/divorced
☐ In a relationship ☐ Single/never married

j. Did you have the opportunity to visit urban green spaces when you were a child?

☐ No ☐ Yes, often ☐ Yes, occasionally ☐ Yes, but not at all often

k. Do you have children?

☐ No ☐ Yes – one ☐ Yes – two ☐ Yes – three ☐ Yes – four
☐ Yes, more than four

l. If yes, do your children have the opportunity to visit urban green spaces? More than one answer possible.

☐ No ☐ Yes, with me ☐ Yes, by themselves
☐ Yes, with a relative or friend ☐ Yes, with CTEET ☐ Yes, at or with school
☐ Yes, with a programme of the City of Cape Town ☐ Yes, other: .....

m. What is your religion?

☐ Christianity ☐ Hinduism ☐ Atheist, agnostic or no religion
☐ Islam ☐ Judaism ☐ Traditional African religion
☐ Other, namely: .....

n. What is your average household income per month in rand?

☐ No income ☐ 7501 – 15 000 ☐ 75 001 – 150 000
☐ 0 – 3500 ☐ 15 001 – 30 000 ☐ 150 001 – 300 000
☐ 3501 – 7500 ☐ 30 001 – 75 000 ☐ 300 001 – 500 000
☐ 500 001 or more

o. Do you have a private garden at your house?

☐ No ☐ Yes, < 5 m^2 ☐ Yes, 5 – 15 m^2 ☐ Yes, 15 – 50 m^2 ☐ Yes, > 50 m^2

p. Write any comments that you may have here:

End of the survey. Thank you so much! Your help is very much appreciated

- If you want to stand the **chance of winning** one of the three prices of a voucher worth R400 for dinner for two at Live Bait in Muizenberg, please leave your phone number and email address here, so I can get in contact with you. This information will be handled confidentially.

Phone number: .....
Email address: .....

- If you want to be **informed** about this project and other urban green space related projects of the City of Cape Town, please leave your email address here:

Email address: .....

- If you would like to **help me further**, please share the online version of this survey with your friends and family. This can be done through sharing the link of the survey through email, Whatsapp, Facebook, or any other means. Rip off or copy the link below or scan the QR-code and send the link to your friends.

https://goo.gl/forms/S6YteMV5ES52Wgyu2

Map number 3: Please use this map to indicate where you live if you are uncomfortable with writing down your address on page 5.

Fill out by surveyor:

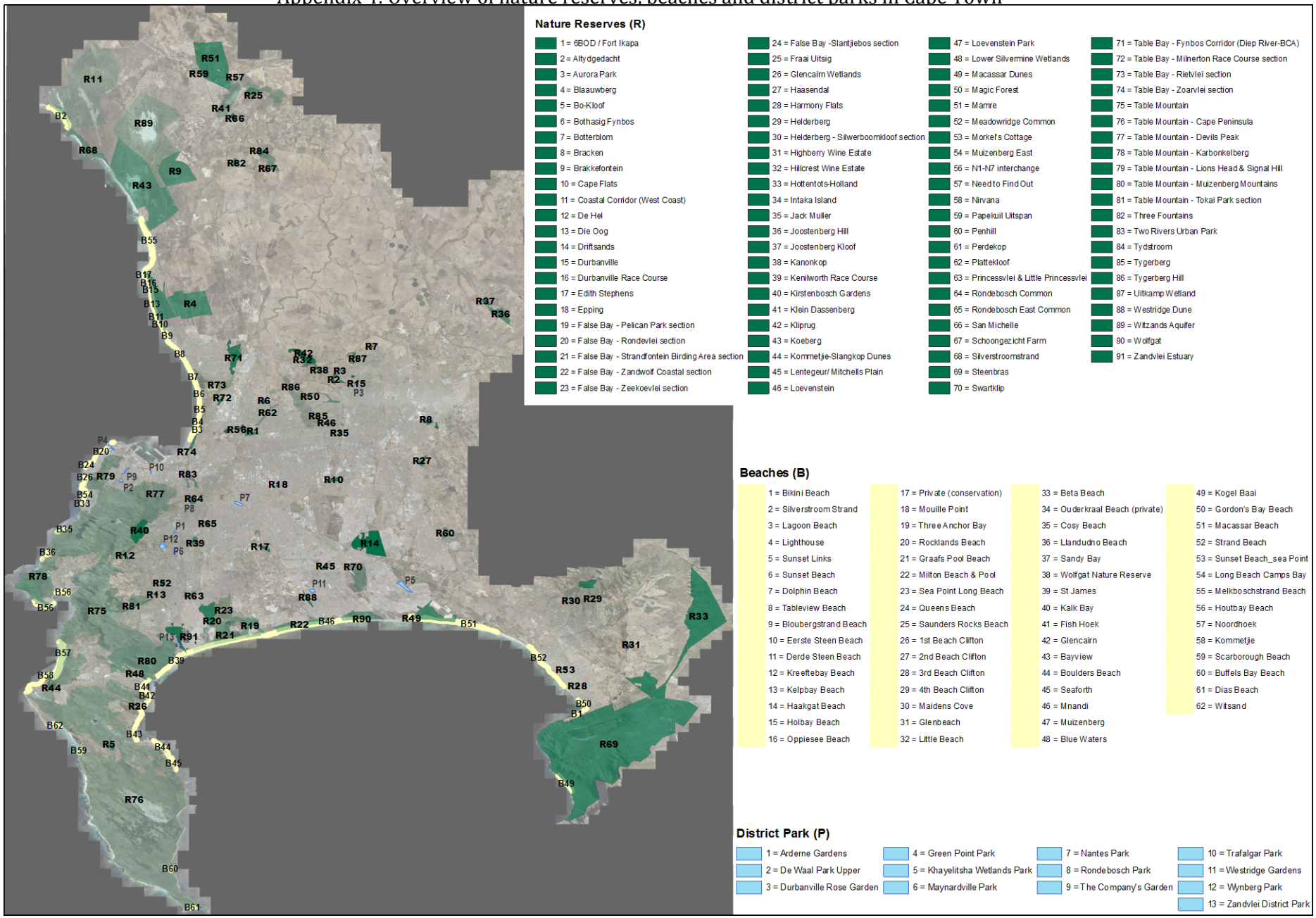
Survey taken at location:

.....

Time: ..... Date: .....

Appendix 3: Grid for indicating residential location

Appendix 4: Overview of nature reserves, beaches and district parks in Cape Town



Appendix 5: Full list of favourite UGS

	Type	Freq.	Per cent	Cum
Muizenberg Beach/Sunrise Beach	Beach	38	14.56	14.56
Kirstenbosch Gardens	Nature reserve	25	9.58	24.14
Zandvlei District Park	District park	18	6.9	31.04
Green Point Park	District park	18	6.9	37.94
The Company's Gardens	District park	17	6.51	44.45
Table Mountain - Silvermine dam area	Nature reserve	15	5.75	50.2
Park Island CP	Community park	13	4.98	55.18
Table Mountain	Nature reserve	12	4.6	59.78
Wynberg Park	District park	10	3.83	63.61
Tokai Forest	Nature reserve	9	3.45	67.06
Table Mountain - Cape Peninsula	Nature reserve	8	3.07	70.13
Arderne Gardens	District park	7	2.68	72.81
Fish Hoek	Beach	7	2.68	75.49
Zandvlei Estuary	Nature reserve	5	1.92	77.41
Constantia Greenbelt	Greenbelt	4	1.53	78.94
Newlands Forest	Nature reserve	4	1.53	80.47
Table Mountain - Muizenberg Mountains	Nature reserve	4	1.53	82
Muizenberg Park	Community park	4	1.53	83.53
Sunset Beach (Sea Point)	Beach	4	1.53	85.06
St James	Beach	4	1.53	86.59
Maynardville Park	District park	3	1.15	87.74
Camps Bay	Beach	3	1.15	88.89
Boulders Beach	Beach	2	0.77	89.66
Constantia nek	Nature reserve	1	0.38	90.04
Langevlei Park	Community park	1	0.38	90.42
Cecelia Forest	Nature reserve	1	0.38	90.8
Solo Street Sports Ground	Sport ground	1	0.38	91.18
Princessvlei & Little Princessvlei	Nature reserve	1	0.38	91.56
Muizenberg East	Nature reserve	1	0.38	91.94
Table Mountain - Fish Hoek Mountains	Nature reserve	1	0.38	92.32
Rondebosch Common	Nature reserve	1	0.38	92.7
False Bay - Zeekoevlei section	Nature reserve	1	0.38	93.08
False Bay - Pelican Park section	Nature reserve	1	0.38	93.46
Clifton Beach 1,2,3 and 4	Beach	1	0.38	93.84
De Waal Park Upper	District park	1	0.38	94.22
Amber Road Park	Community park	1	0.38	94.6
Gluck Street Park	Community park	1	0.38	94.98
Mossie Street Park	Community park	1	0.38	95.36
Keurboom Park	Community park	1	0.38	95.74
Paradise Park	Community park	1	0.38	96.12
Bloubergstrand Beach	Beach	1	0.38	96.5
Sandy Bay	Beach	1	0.38	96.88
Houtbay Beach	Beach	1	0.38	97.26
Dalebrook Tidal Pool	Beach	1	0.38	97.64
Sea Point Long Beach	Beach	1	0.38	98.02
Tableview Beach	Beach	1	0.38	98.4
Longbeach Simon's Town	Beach	1	0.38	98.78
Windmill Beach	Beach	1	0.38	99.16
Gordon's Bay Beach	Beach	1	0.38	99.54
Table Mountain - Lions Head and Signal Hill	Nature reserve	1	0.38	99.92

*Freq.=frequency of UGS mentioned as being favourite UGS

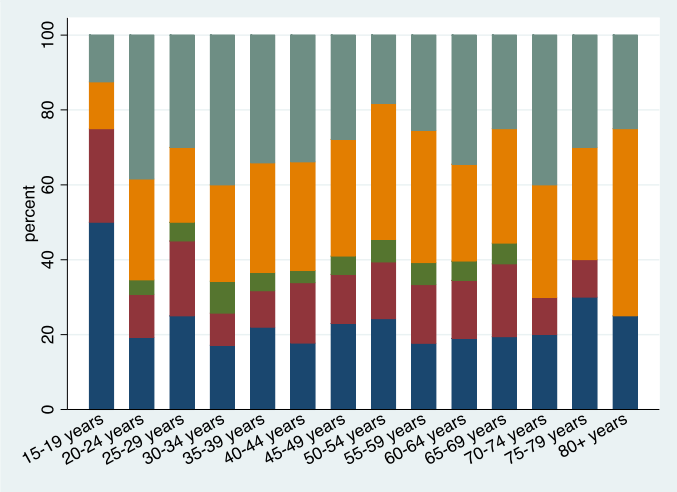
Appendix 6: Full list of most frequently visited UGS

	Type	Freq.	per cent	Cum.
Muizenberg Beach/Sunrise Beach	Beach	61	25	25
Zandvlei District Park	District park	32	13.11	38.11
Park Island CP	Community park	18	7.38	45.49
Green Point Park	District park	12	4.92	50.41
The Company's Gardens	District park	10	4.1	54.51
St James	Beach	9	3.69	58.2
Kirstenbosch Gardens	Nature reserve	8	3.28	61.48
Zandvlei Estuary	Nature reserve	8	3.28	64.76
Fish Hoek	Beach	7	2.87	67.63
Tokai Forest	Nature reserve	7	2.87	70.5
Wynberg Park	District park	7	2.87	73.37
Table Mountain - Silvermine dam area	Nature reserve	6	2.46	75.83
Arderne Gardens	District park	5	2.05	77.88
Sunset Beach (Sea Point)	Beach	4	1.64	79.52
Table Mountain	Nature reserve	4	1.64	81.16
Newlands Forest	Nature reserve	4	1.64	82.8
Muizenberg Park	Community park	4	1.64	84.44
Table Mountain - Cape Peninsula	Nature reserve	3	1.23	85.67
Muizenberg East	Nature reserve	3	1.23	86.9
Camps Bay	Beach	2	0.82	87.72
Houtbay Beach	Beach	2	0.82	88.54
Longbeach Simon's Town	Beach	2	0.82	89.36
Boulders Beach	Beach	2	0.82	90.18
Constantia Greenbelt	Greenbelt	2	0.82	91
Maynardville Park	District park	2	0.82	91.82
Table Mountain - Lions Head and Signa..	Nature reserve	1	0.41	92.23
Alphen Trail	Greenbelt	1	0.41	92.64
Gordon's Bay Beach	Beach	1	0.41	93.05
Hilary Drive POS	Undeveloped green space	1	0.41	93.46
Sandy Bay	Beach	1	0.41	93.87
De Waal Park Upper	District park	1	0.41	94.28
Constantia nek	Nature reserve	1	0.41	94.69
Keurboom Park	Community park	1	0.41	95.1
Dalebrook Tidal Pool	Beach	1	0.41	95.51
Noordhoek	Beach	1	0.41	95.92
Raapkraal Park	Community park	1	0.41	96.33
Solo Street Sports Ground	Sport ground	1	0.41	96.74
St Blaise Park	Community park	1	0.41	97.15
False Bay - Pelican Park section	Nature reserve	1	0.41	97.56
Mossie Street Park	Community park	1	0.41	97.97
Gluck Street Park	Community park	1	0.41	98.38
Table Mountain - Muizenberg Mountains	Nature reserve	1	0.41	98.79
Blue Waters	Beach	1	0.41	99.2
Bassoon Street Park	Community park	1	0.41	99.61
Dune Road Park	Community park	1	0.41	100.02

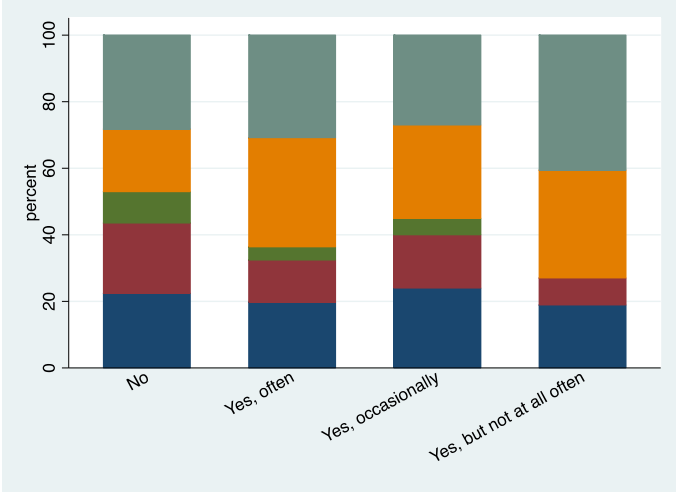
*Freq.=frequency of UGS mentioned as being favourite UGS

Appendix 7: Most important factor, based on mean rating of UGS-functions categorized in factor

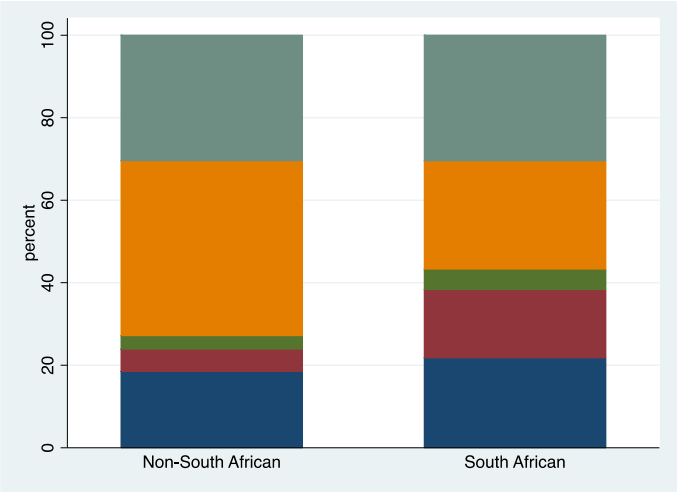
a. Age group



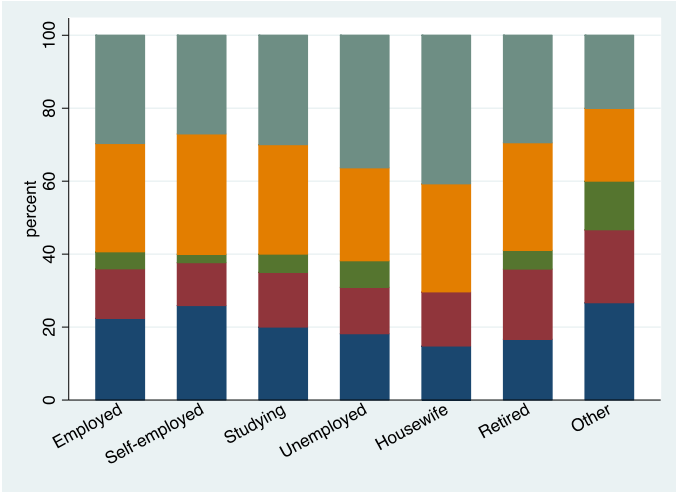
b. UGS-visits as a child



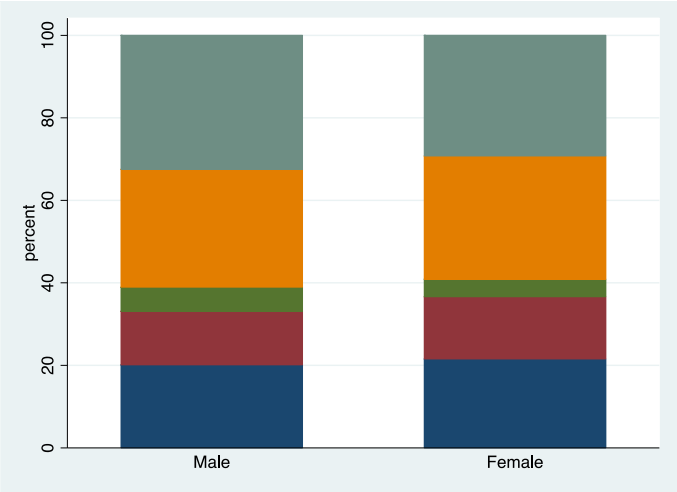
c. Nationality



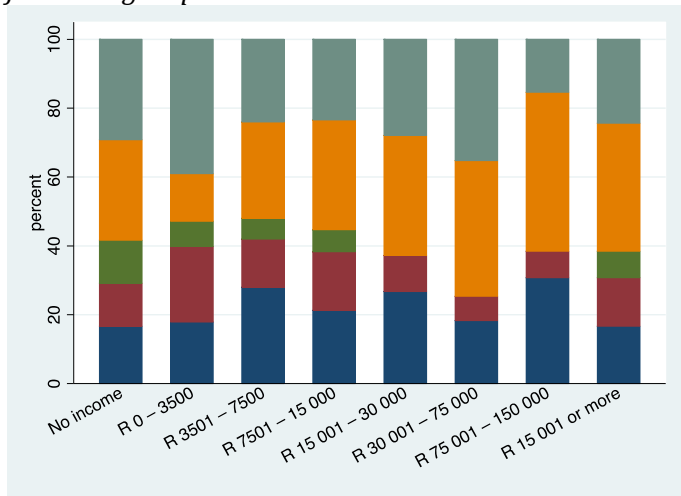
d. Employment status



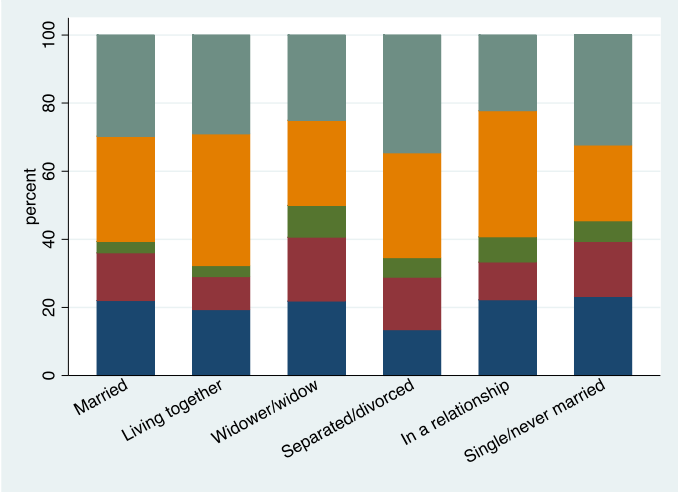
e. Gender



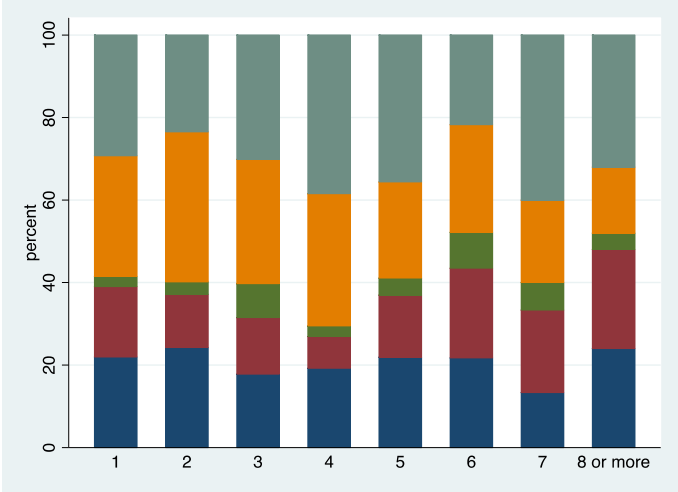
f. Income group



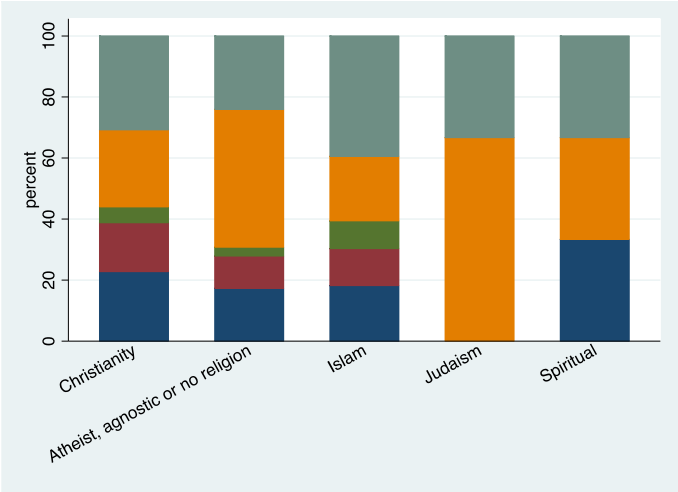
g. Marital status

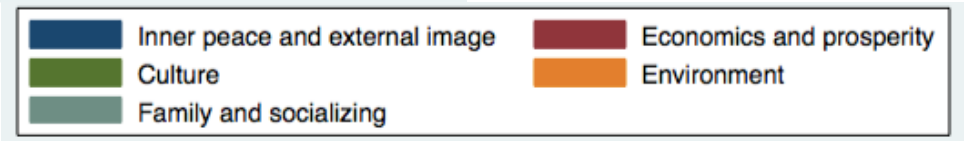


h. Household size



i. Religion





Appendix 8: Importance of UGS functions - ordered logistic regression analysis imp ordered logistic regression, odds ratios

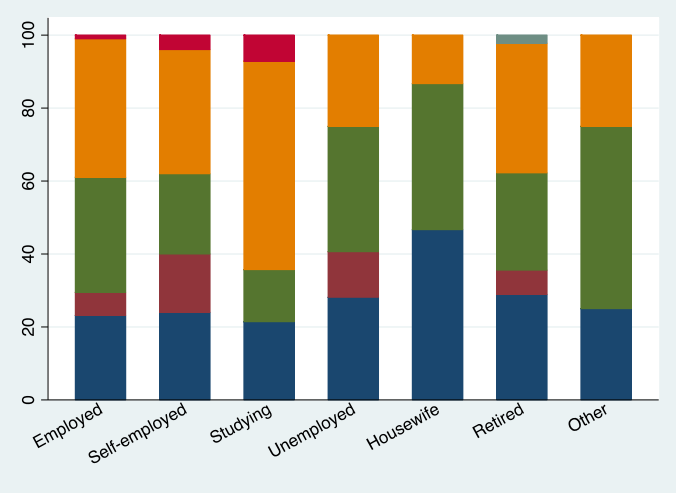
		(1) Inner peace and external image	(2) Economics and prosperity	(3) Environment	(4) Culture	(5) Family and socializing
Individual	Gender					
	Male	Base				
	Female	2.062 (1.64)	1.558 (1.10)	2.419** (2.05)	1.020 (0.05)	1.638 (1.15)
	Race					
	White	Base				
	Choose not to classify	0.753 (-0.40)	1.157 (0.23)	1.435 (0.49)	1.674 (0.81)	2.803 (1.38)
	Black African	0.179 (-1.25)	1.555 (0.35)	0.133 (-1.61)	12.45** (2.18)	0.464 (-0.63)
	Coloured	0.461 (-0.91)	0.536 (-0.77)	0.961 (-0.05)	3.761* (1.68)	1.166 (0.19)
	Nationality					
	Non-South African	Base				
	South African	1.966 (1.42)	1.926 (1.52)	0.568 (-1.24)	1.805 (1.40)	1.381 (0.69)
	Education					
	No education	Base				
	Primary (Grade 1-7)	1.784 (0.41)	1.069 (0.05)	3.887 (1.03)	0.753 (-0.23)	0.627 (-0.35)
	Second. (Grade 8-10)	1.000 (0.00)	0.564 (-0.43)	2.582 (0.78)	0.572 (-0.48)	0.750 (-0.23)
	Second. (Grade 11-12)	3.138 (0.81)	0.652 (-0.31)	5.835 (1.37)	0.491 (-0.58)	2.415 (0.66)
	National Diploma	2.804 (0.67)	0.143 (-1.29)	4.733 (1.10)	0.283 (-0.95)	2.127 (0.52)
	Bachelor's Degree	1.257 (0.15)	0.0784* (-1.67)	1.875 (0.45)	0.0751* (-1.92)	1.296 (0.18)
	Master's Degree	1.652 (0.30)	0.0237** (-2.34)	0.986 (-0.01)	0.0418** (-2.21)	1.424 (0.23)
	Doctorate	0.410 (-0.54)	0.0068*** (-3.03)	0.270 (-0.88)	0.0408** (-2.21)	0.363 (-0.66)
	Employment status					
	Employed	Base				
	Self-employed	0.721 (-0.61)	0.516 (-1.33)	0.797 (-0.43)	0.426* (-1.73)	1.272 (0.45)
	Studying	0.774 (-0.32)	2.647 (1.33)	3.253 (1.48)	2.504 (1.17)	1.357 (0.35)
	Unemployed	0.382 (-1.44)	0.567 (-0.87)	0.396 (-1.31)	0.498 (-1.01)	0.886 (-0.18)
	Housewife	0.205* (-1.83)	0.832 (-0.24)	0.394 (-1.18)	1.491 (0.54)	1.914 (0.71)
	Retired	0.134*** (-3.00)	0.185*** (-2.63)	0.212** (-2.35)	0.439 (-1.27)	0.581 (-0.82)
	Other	18.44* (1.94)	3.155 (0.63)	4.586 (1.04)	4.068 (0.80)	1.775 (0.36)
	Marital status					
	Single/never married	Base				
	Married	1.913 (1.20)	4.944*** (2.96)	1.927 (1.10)	2.541* (1.77)	1.747 (1.02)
	Living together	1.740 (0.81)	1.398 (0.52)	1.336 (0.41)	0.654 (-0.64)	1.326 (0.40)
	Widower/widow	0.848 (-0.16)	4.364 (1.42)	1.868 (0.56)	6.615* (1.83)	1.262 (0.22)
	Separated/divorced	0.164** (-2.39)	0.458 (-1.03)	1.166 (0.23)	0.643 (-0.66)	0.452 (-1.14)
	In a relationship	0.625 (-0.56)	0.684 (-0.46)	0.828 (-0.20)	1.028 (0.03)	1.257 (0.25)
	Childhood visit UGS					
	No	Base				
	Yes	0.266** (-2.18)	0.180*** (-2.84)	0.931 (-0.11)	0.393* (-1.67)	0.966 (-0.05)
	Religion					
	Atheist/agnostic/no rel.	Base				
	Christianity	1.586 (0.92)	0.588 (-1.10)	0.567 (-1.18)	1.065 (0.13)	2.406* (1.78)
	Islam	3.905 (1.41)	1.422 (0.37)	3.273 (1.05)	3.889 (1.30)	11.86** (2.38)
	Judaism	0.217 (-1.00)	0.0758* (-1.94)	-	0.287 (-0.93)	0.367 (-0.65)
	Spiritual	26.73** (2.46)	1.491 (0.32)	0.541 (-0.51)	1.595 (0.40)	0.542 (-0.39)
	Household income					
	No income	Base				
	R 0 - 3500	1.226 (0.26)	0.371 (-1.26)	0.181** (-1.96)	0.727 (-0.40)	0.423 (-1.04)
	R 3501 - 7500	0.749 (-0.34)	0.318 (-1.36)	0.423 (-0.94)	0.371 (-1.17)	0.389 (-1.07)
	R 7501 - 15 000	0.874 (-0.14)	0.160* (-1.93)	0.464 (-0.73)	0.225 (-1.58)	0.192 (-1.64)
	R 15 001 - 30 000	4.053 (1.48)	0.206* (-1.73)	0.933 (-0.07)	0.572 (-0.61)	0.769 (-0.27)
	R 30 001 - 75 000	1.996 (0.71)	0.291 (-1.31)	0.958 (-0.04)	0.166* (-1.90)	0.811 (-0.22)
	R 75 001 - 150 000	3.456 (1.08)	1.241 (0.17)	1.280 (0.20)	1.072 (0.06)	0.0807* (-1.92)
	R 150 001 - 300 000	0.0757 (-1.11)	1.272 (0.10)	-	10.45 (0.99)	-
	R 500 001 or more	2.236 (0.63)	0.401 (-0.74)	2.781 (0.67)	4.827 (1.27)	1.206 (0.14)
	People in household	0.934 (-0.69)	0.864 (-1.29)	0.857 (-1.41)	0.963 (-0.39)	0.909 (-0.85)

	Age	1.016 (0.82)	1.011 (0.60)	1.037* (1.92)	1.001 (0.06)	1.012 (0.65)
Visit behaviour	Total visits	1.002 (0.72)	1.001 (0.56)	1.000 (-0.04)	1.000 (0.07)	1.001 (0.51)
	Visits favourite UGS	1.005* (1.89)	1.004* (1.67)	1.003 (1.11)	1.001 (0.67)	1.000 (0.21)
	Visits most freq. UGS	1.000 (0.05)	0.998 (-0.60)	1.002 (0.60)	0.999 (-0.29)	0.998 (-0.72)
	Length stay most freq.	0.962 (-1.36)	0.946** (-1.99)	0.978 (-0.80)	1.000 (0.02)	1.025 (0.48)
	Distance to favourite	1.038 (1.44)	1.045* (1.69)	1.061** (2.35)	1.035 (1.41)	1.029 (1.12)
	Distance to most freq.	1.016 (0.55)	0.980 (-0.78)	0.940** (-2.33)	0.958 (-1.57)	0.967 (-1.23)
Locational	Garden					
	No	Base				
	Yes	2.421* (1.84)	2.403** (2.00)	2.267* (1.72)	1.325 (0.63)	3.397** (2.54)
	Neighbourhood					
	Lavender Hill	Base				
	Seawinds	9.426** (1.98)	3.700 (1.30)	23.26*** (2.68)	3.291 (1.09)	0.778 (-0.25)
	Vrygrond/Capricorn	0.274 (-1.29)	0.131** (-2.14)	0.971 (-0.03)	0.213* (-1.71)	0.537 (-0.66)
	Steenberg/Retreat	1.170 (0.15)	0.574 (-0.54)	2.545 (0.90)	0.284 (-1.27)	1.669 (0.49)
	Sheraton/Coniston P.	0.715 (-0.21)	0.211 (-1.01)	3.318 (0.82)	0.265 (-0.90)	0.925 (-0.05)
	Kirstenhof	0.243 (-0.62)	0.377 (-0.45)	-	1.062 (0.03)	0.302 (-0.51)
	Muizenberg	0.162 (-1.25)	0.351 (-0.78)	1.101 (0.07)	0.467 (-0.60)	3.880 (1.02)
	Lakeside	0.161 (-1.25)	0.189 (-1.21)	0.929 (-0.05)	0.749 (-0.21)	1.312 (0.20)
	Marina da Gama	0.0824* (-1.74)	0.304 (-0.94)	0.461 (-0.58)	0.931 (-0.06)	0.422 (-0.66)
	Distance to nearest	2.222 (0.26)	4.699 (0.56)	0.107 (-0.77)	18.20 (1.07)	0.0339 (-1.12)
	Size nearest	1.000 (-0.89)	1.000 (-1.27)	1.000 (-0.68)	1.000 (-1.44)	1.000 (0.08)
	Area community park	1.000** (-2.47)	1.000** (-2.46)	1.000*** (-2.66)	1.000** (-1.96)	1.000 (-1.40)
	Area district park	1.000 (-0.19)	1.000 (1.36)	1.000 (0.03)	1.000 (0.96)	1.000 (-1.46)
	Area nature reserve	1.000 (1.46)	1.000 (-0.85)	1.000 (0.73)	1.000 (-1.12)	1.000 (-0.40)
	Households in neighb.	1.000 (0.06)	1.000 (0.90)	1.000*** (2.65)	1.000* (1.65)	1.000 (1.64)
	N	170	170	171	172	173

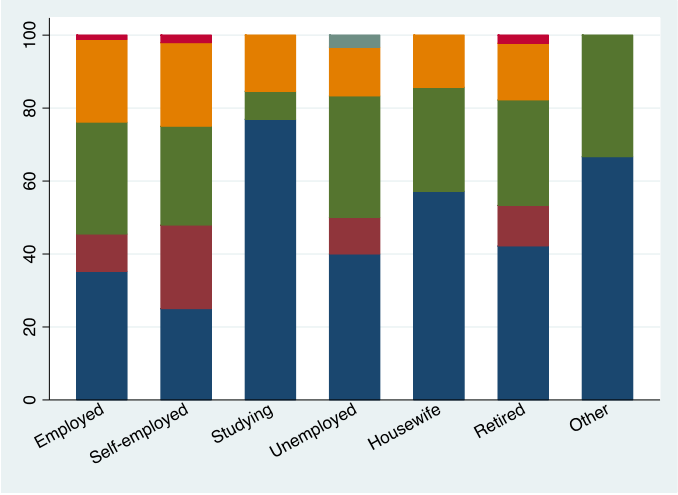
*p<0.1, ** p<0.5, *** p<0.01

Appendix 9: Favourite and most frequently visited UGS

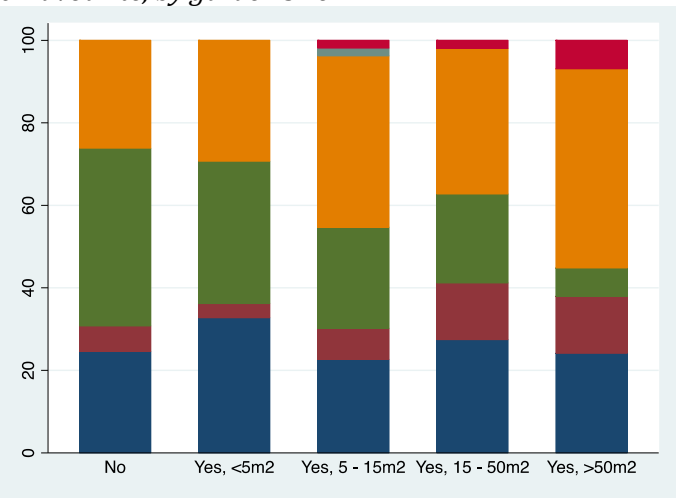
a. Favourite, by employment status



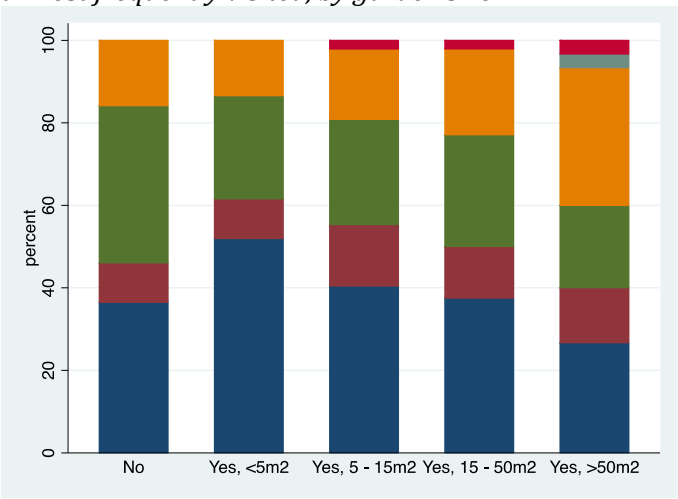
b. Most frequently visited, by employment status



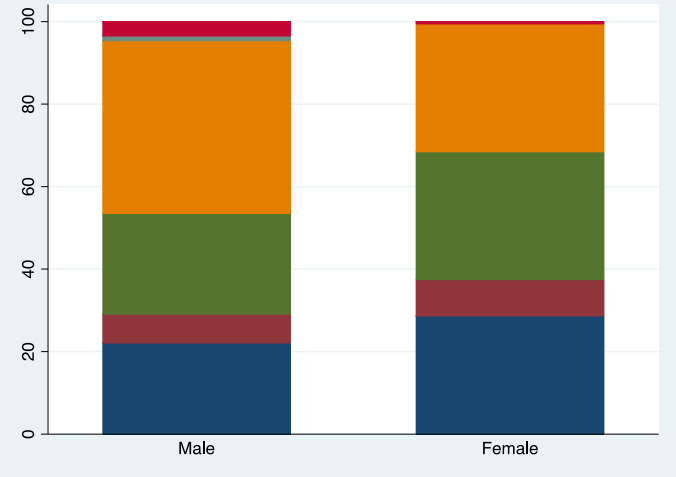
c. Favourite, by garden size



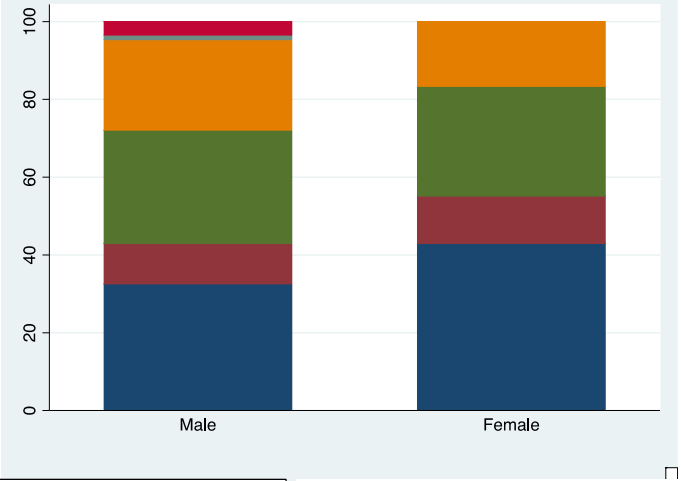
d. Most frequently visited, by garden size



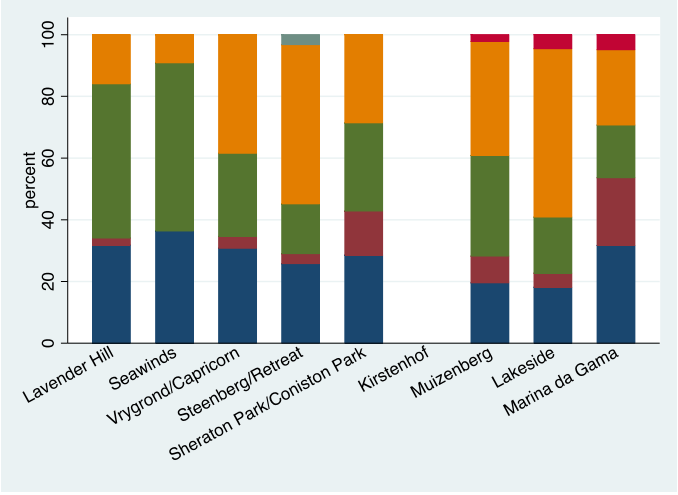
e. Favourite, by gender



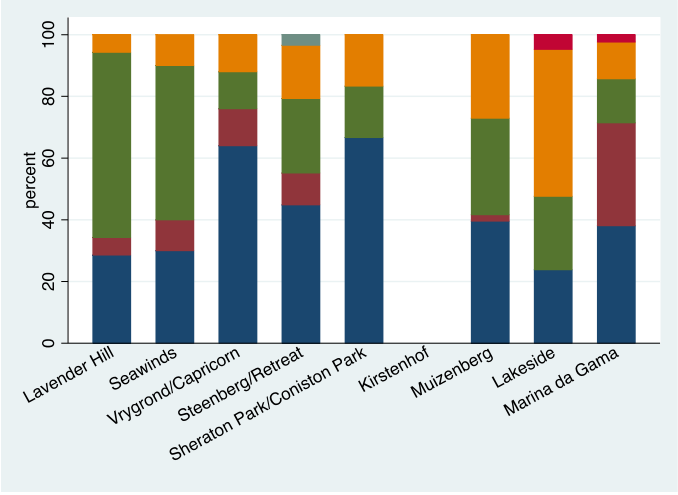
f. Most frequently visited, by gender



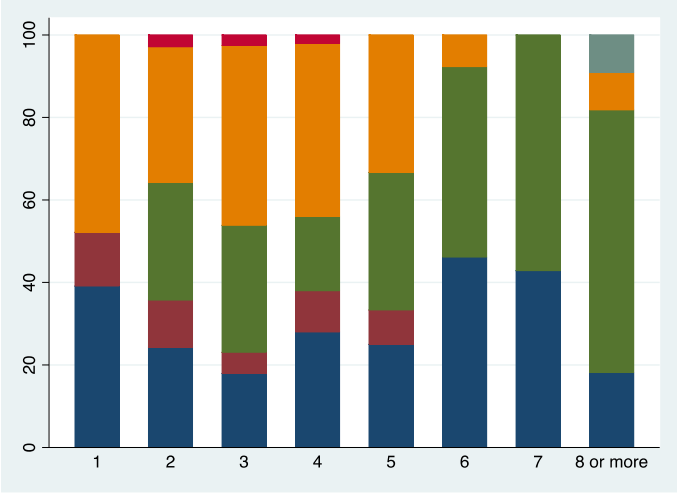
g. Favourite, by neighbourhood



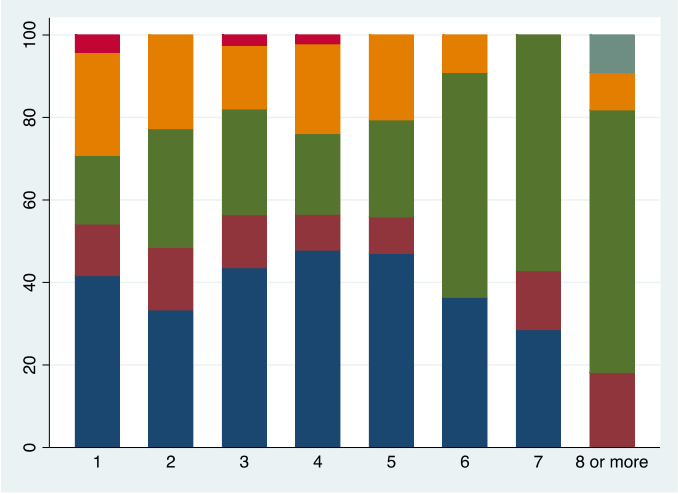
h. Most frequently visited, by neighbourhood



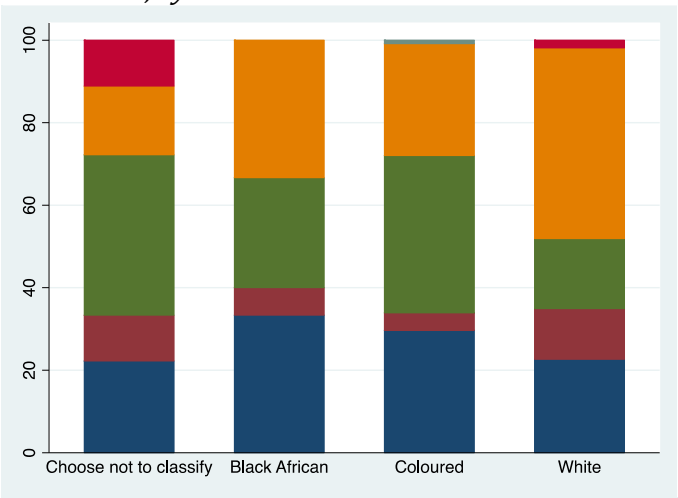
i. Favourite, by household size



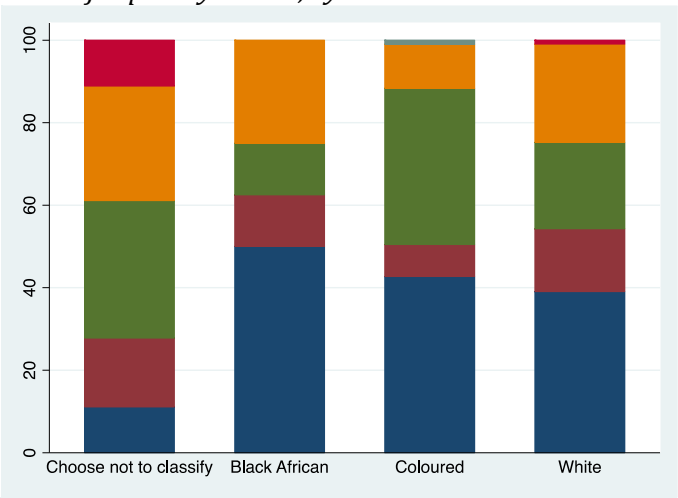
j. Most frequently visited, by household size



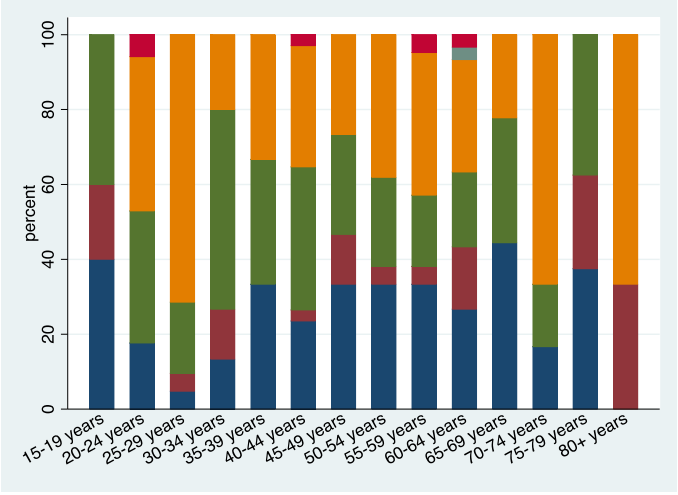
k. Favourite, by race



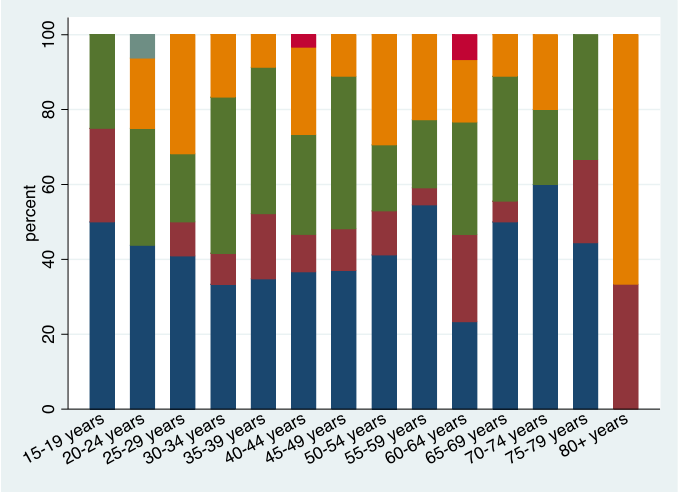
l. Most frequently visited, by race



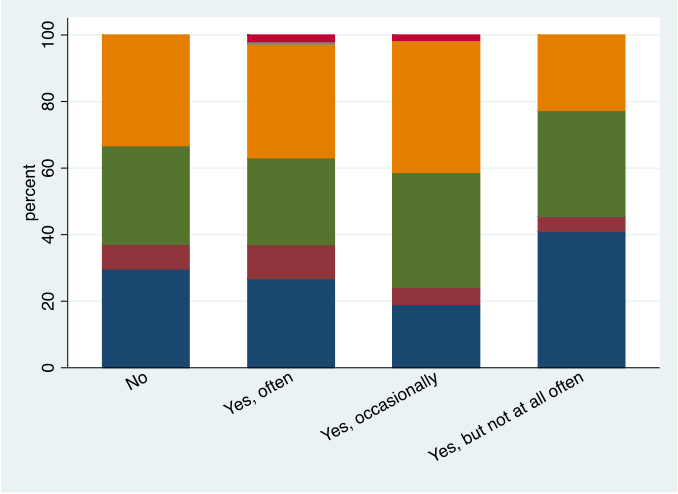
m. Favourite, by age group



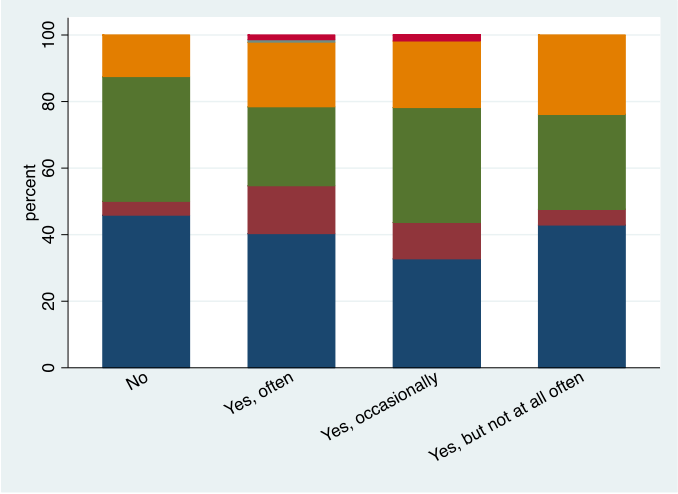
n. Most frequently visited, by age group



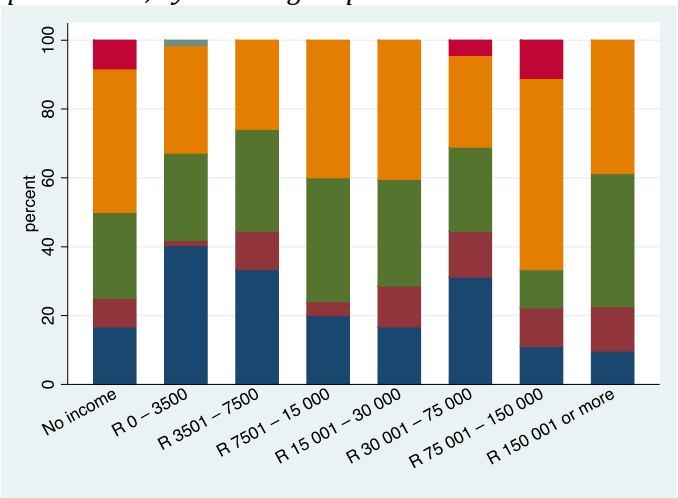
o. Favourite, by UGS-visits as a child



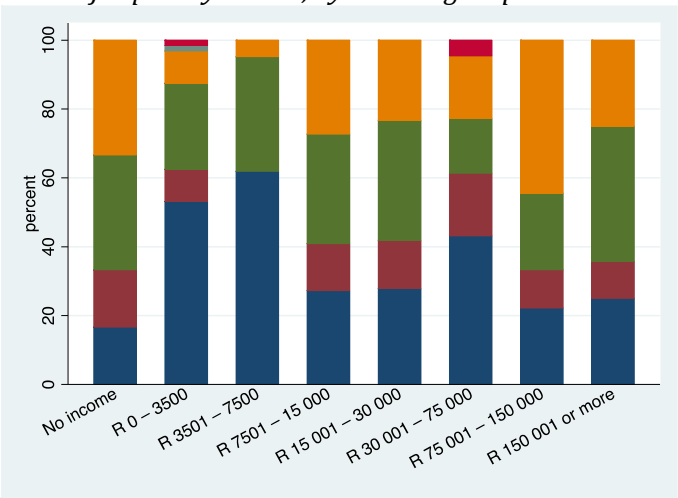
p. Most frequently visited, by UGS-visits as a child



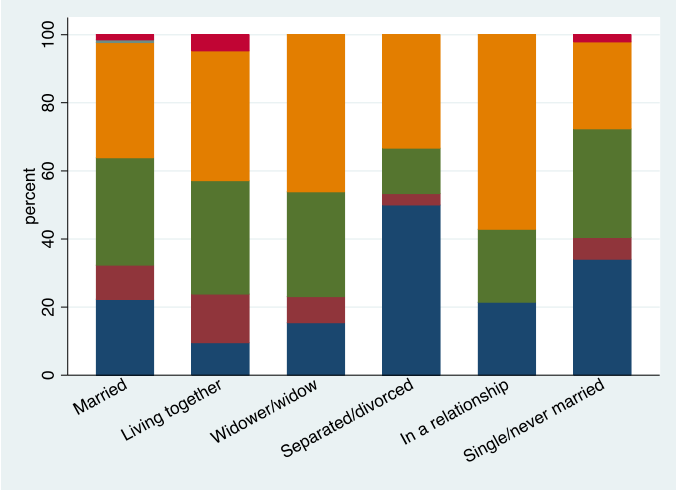
q. Favourite, by income group



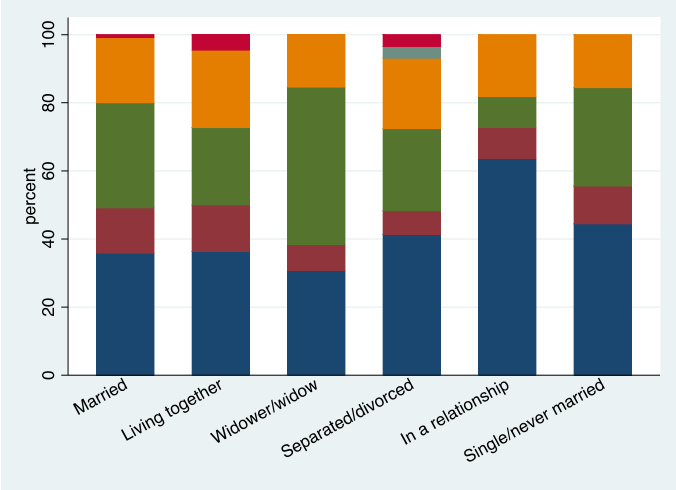
r. Most frequently visited, by income group



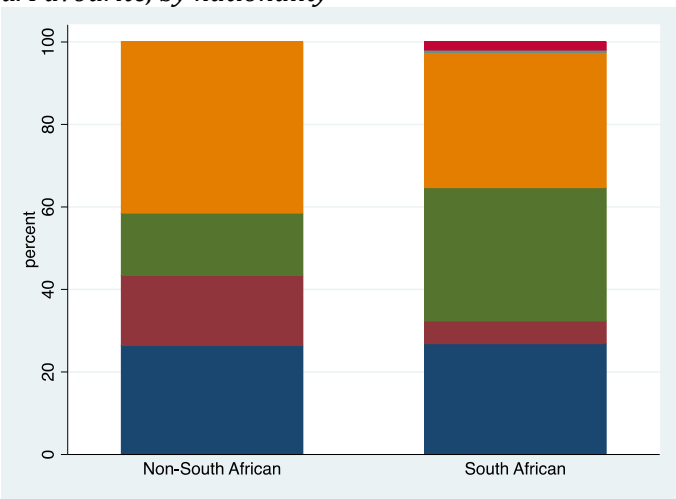
s. Favourite, by marital status



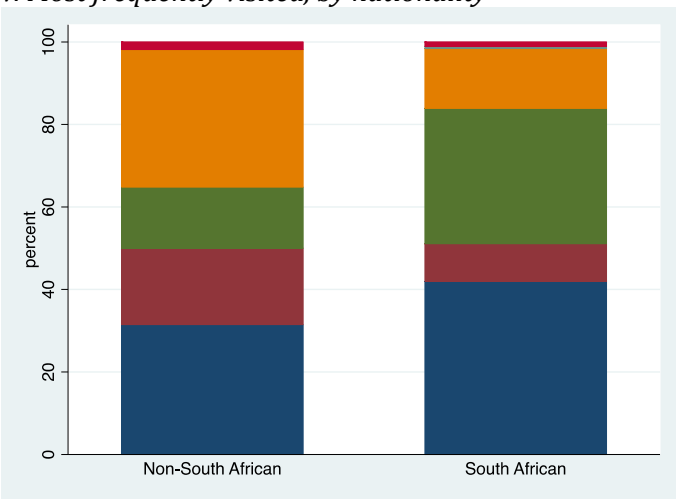
t. Most frequently visited, by marital status



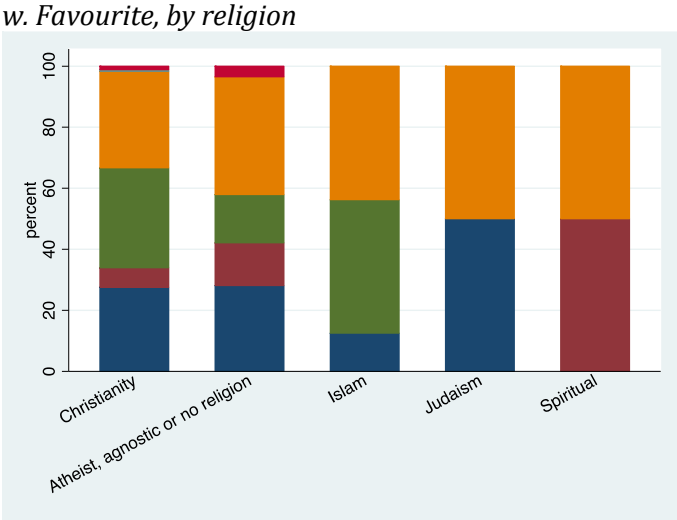
u. Favourite, by nationality



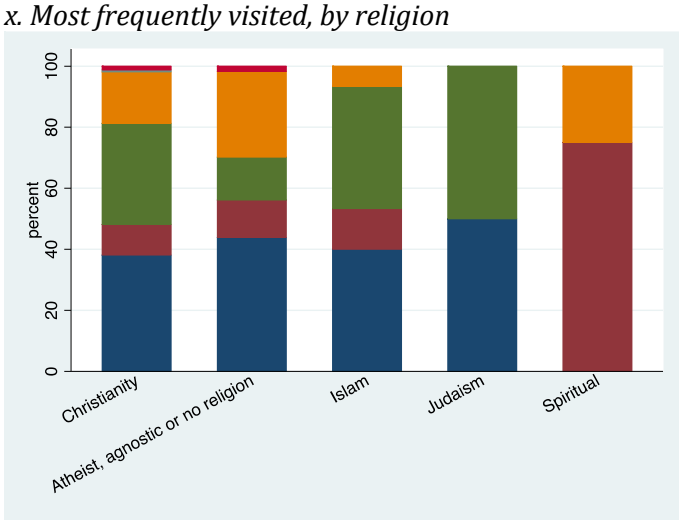
v. Most frequently visited, by nationality



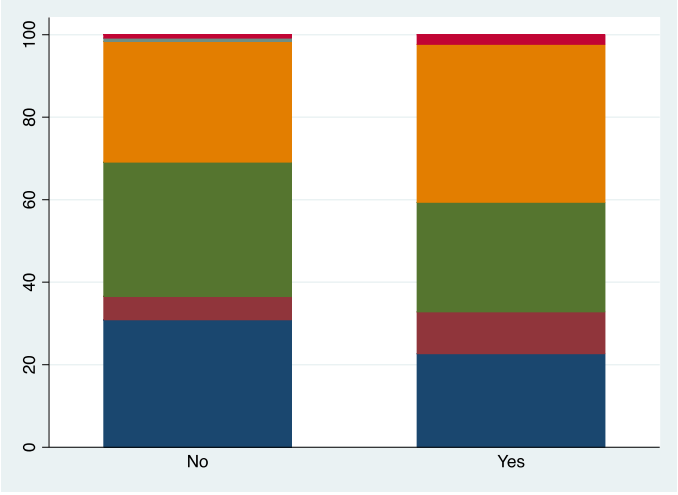
w. Favourite, by religion



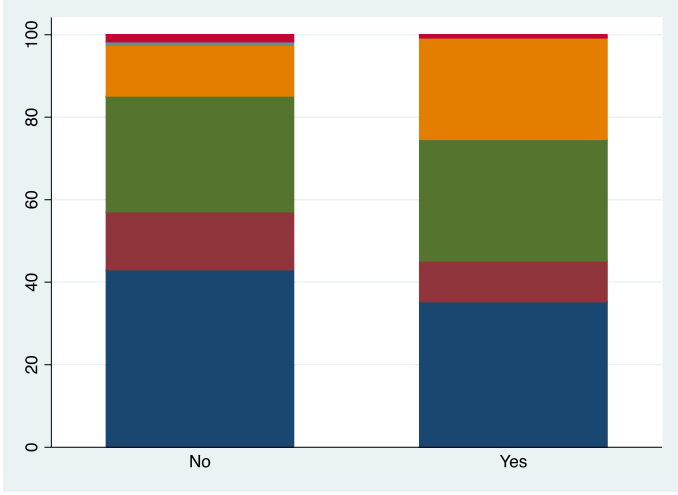
x. Most frequently visited, by religion



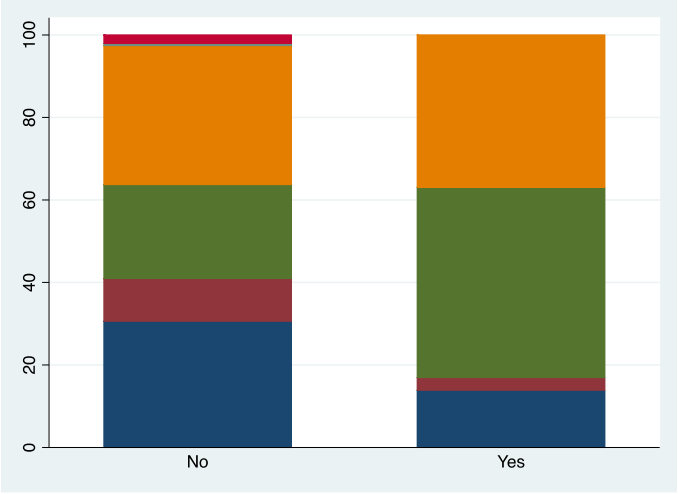
y. Favourite, 'environment' most important



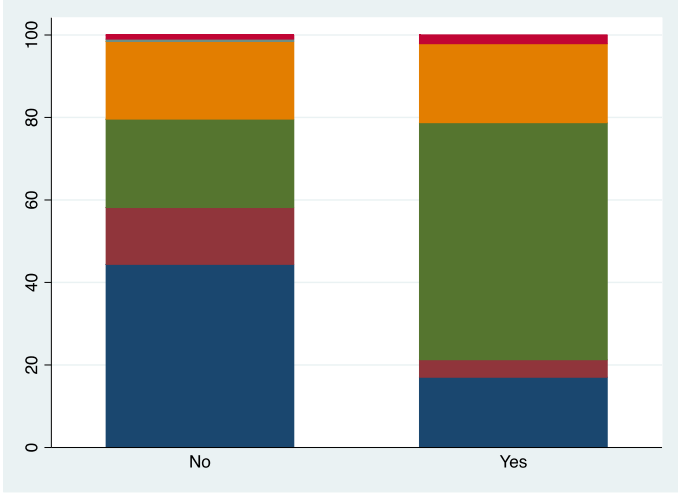
z. MFV, 'environment' most important



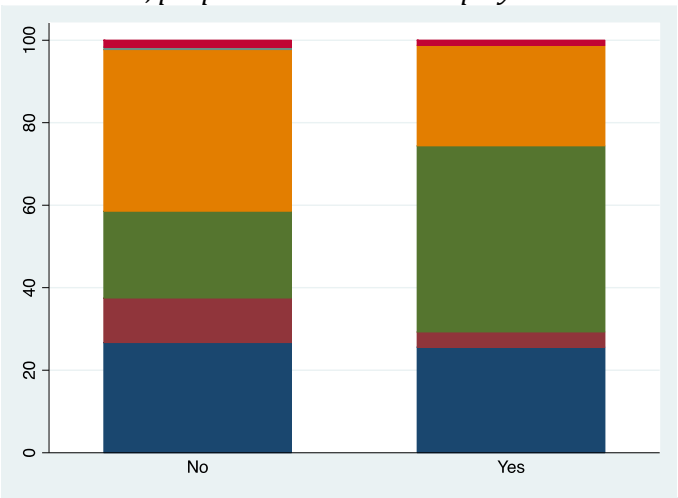
1. Favourite, purpose of visit: braai/picnic



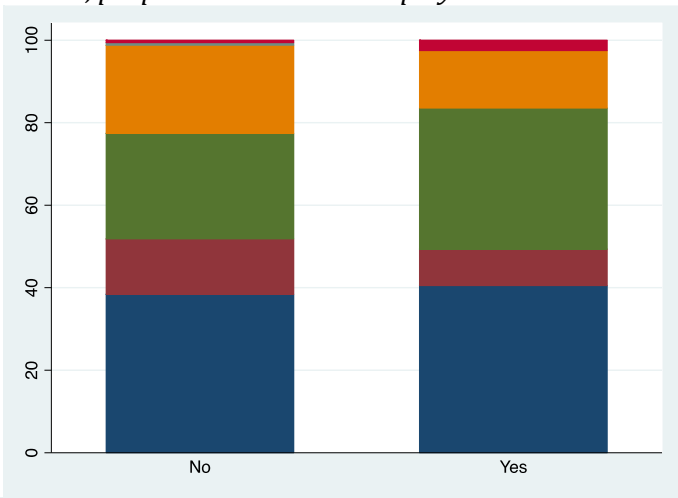
2. MFV, purpose of visit: braai/picnic



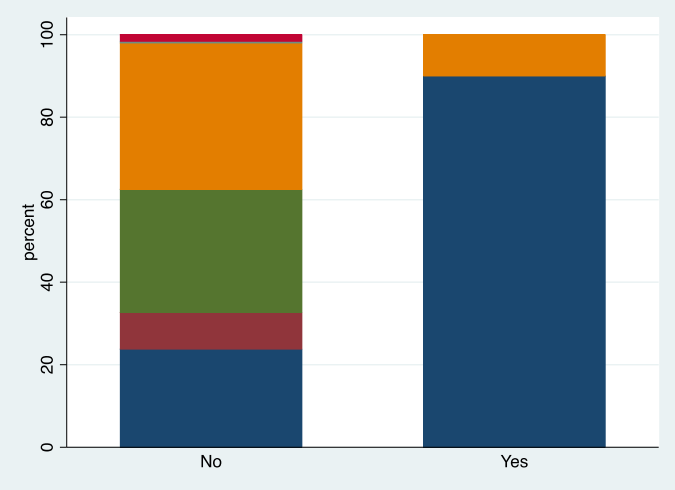
3. Favourite, purpose: let the children play outside



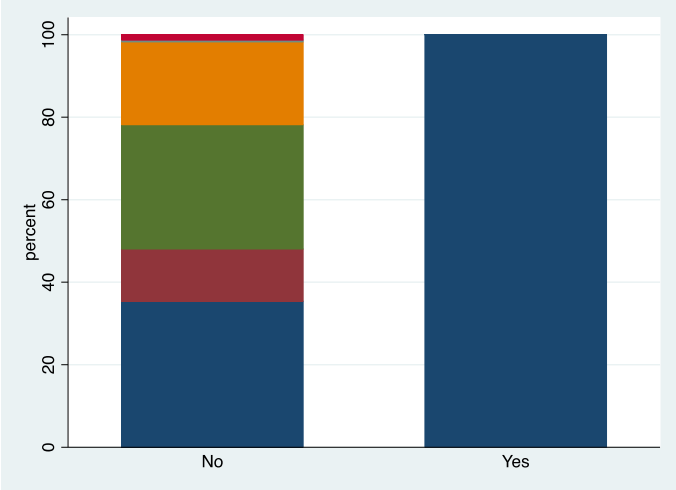
4. MFV, purpose: let the children play outside



5. Favourite, purpose: swim



6. Most frequently visited, purpose: swim



Appendix 10: Multinominal logistic regression for relative risk ratios – favourite and most frequently visited UGS

Model 1: Neighbourhoods	Favourite	Most frequently visited
Community Park	Base outcome	Base outcome
Beach		
Lavender Hill	Base	Base
Seawinds	351011.3 (0.01)	0.545 (-0.44)
Vrygrond/Capricorn	0.571 (-0.38)	1.152 (0.14)
Steenberg/Retreat	0.571 (-0.38)	0.848 (-0.16)
Sheraton Park/Coniston Park	0.143 (-1.21)	-
Kirstenhof	-	-
Muizenberg	0.161 (-1.53)	3.636 (1.01)
Lakeside	0.286 (-0.82)	-
Marina da Gama	0.103** (-2.02)	0.208* (-1.85)
District Park		
Lavender Hill	Base	Base
Seawinds	-	0.476 (-0.56)
Vrygrond/Capricorn	0.318 (-0.77)	0.0952** (-2.13)
Steenberg/Retreat	0.227 (-0.99)	0.222 (-1.49)
Sheraton Park/Coniston Park	0.0909 (-1.50)	-
Kirstenhof	0.172 (-0.00)	0.250 (-0.00)
Muizenberg	0.170 (-1.52)	1.428 (0.28)
Lakeside	0.182 (-1.13)	-
Marina da Gama	0.0353*** (-2.93)	0.0408*** (-3.61)
Nature reserve		
Lavender Hill	Base	Base
Seawinds	175513.2 (0.01)	1.000 (-0.00)
Vrygrond/Capricorn	1.429 (0.24)	0.999 (-0.00)
Steenberg/Retreat	2.286 (0.56)	1.666 (0.41)
Sheraton Park/Coniston Park	0.286 (-0.77)	-
Kirstenhof	0.595 (-0.00)	1.666 (0.00)
Muizenberg	0.607 (-0.41)	13.00* (1.78)
Lakeside	1.715 (0.36)	-
Marina da Gama	0.159 (-1.58)	0.357 (-0.91)
N	236	225

*p<0.1 , ** p<0.05, *** p<0.01

Model 2: Race	Favourite	Most frequently visited
Community Park	Base outcome	Base outcome
Beach		
White	Base	Base
Choose no classif.	1.083 (0.09)	0.260 (-1.40)
Black African	2.709 (0.87)	2.146 (0.93)
Coloured	3.792** (2.26)	2.341* (1.76)
District Park		
White	Base	Base
Choose no classif.	2.528 (1.05)	1.455 (0.48)
Black African	2.889 (0.90)	0.727 (-0.30)
Coloured	6.501*** (3.14)	3.546** (2.49)
Nature reserve		
White	Base	Base
Choose no classif.	0.398 (-0.96)	1.067 (0.08)
Black African	1.327 (0.25)	1.280 (0.27)
Coloured	1.698 (0.92)	0.880 (-0.23)
N	264	250

*p<0.1 , ** p<0.05, *** p<0.01

Model 3: Nationality	Favourite	Most freq. visited
Community park	Base outcome	Base outcome
Beach		
Non-South African	Base	Base
South African	3.155** (2.13)	2.712** (2.10)
District Park		
Non-South African	Base	Base
South African	6.650*** (3.24)	4.485*** (2.74)
Nature reserve		
Non-South African	Base	Base
South African	2.454* (1.75)	0.882 (-0.25)
N	260	247

*p<0.1 , ** p<0.05, *** p<0.01

Model 4: Income and neighbourhood	Favourite	Most frequently visited
Community park	Base outcome	Base outcome
Beach		
Lavender Hill	Base	Base
Seawinds	3776597.5 (0.00)	0.323 (-0.77)
Vrygrond/Capricorn	0.406 (-0.58)	0.821 (-0.19)
Steenberg/Retreat	0.414 (-0.55)	0.629 (-0.42)
Sheraton P./Coniston P.	0.0698 (-1.49)	4291622.1 (0.01)
Kirstenhof	51889233.9 (0.00)	3833361.8 (0.00)
Muizenberg	0.135 (-1.37)	2.333 (0.58)
Lakeside	0.223 (-0.86)	1656921.9 (0.01)
Marina da Gama	0.0887* (-1.65)	0.149 (-1.53)
No income	Base	Base
R 0 - R3500	18.90* (1.72)	4.543 (1.29)
R 3501 - R7500	1.758 (0.37)	34322611.7 (0.01)
R 7501 - R15 000	10.60 (1.26)	4.157 (0.95)
R 15 001 - R30 000	3.430 (0.72)	4.768 (1.10)
R 30 001 - R75 000	6.823 (1.17)	5.529 (1.22)
R 75 001 - R150 000	110209499.8 (0.00)	2978316.6 (0.01)
R 150 001 or more	1.819 (0.35)	5.625 (1.19)
District Park		
Lavender Hill	Base	Base
Seawinds	2098465.9 (0.00)	0.198 (-1.12)
Vrygrond/Capricorn	0.206 (-1.02)	0.0509** (-2.50)
Steenberg/Retreat	0.0515* (-1.78)	0.0845** (-2.12)
Sheraton P./Coniston P.	0.0138** (-2.30)	457676.3 (0.00)
Kirstenhof	0.352 (-0.00)	0.0381 (-0.00)
Muizenberg	0.0202*** (-2.60)	0.256 (-0.91)
Lakeside	0.0212** (-2.16)	302637.5 (0.01)
Marina da Gama	0.00337*** (-3.70)	0.00630*** (-3.81)
No income	Base	Base
R 0 - R3500	10.77 (1.39)	1.855 (0.53)
R 3501 - R7500	1.714 (0.35)	20195705.2 (0.01)
R 7501 - R15 000	62.62** (2.17)	6.432 (1.19)
R 15 001 - R30 000	47.19** (2.24)	26.66** (2.21)
R 30 001 - R75 000	37.91** (2.14)	7.352 (1.33)
R 75 001 - R150 000	463993261.3 (0.00)	6850544.7 (0.01)
R 150 001 or more	20.76* (1.78)	12.94* (1.71)
Reserve		
Lavender Hill	Base	Base
Seawinds	2223768.7 (0.00)	1.235 (0.11)
Vrygrond/Capricorn	1.193 (0.11)	1.213 (0.14)
Steenberg/Retreat	1.722 (0.34)	1.928 (0.47)
Sheraton P./Coniston P.	0.174 (-0.98)	12601980.4 (0.01)
Kirstenhof	1.558 (0.00)	1.148 (0.00)
Muizenberg	0.334 (-0.75)	9.202 (1.32)
Lakeside	1.116 (0.07)	22088276.8 (0.01)
Marina da Gama	0.0841* (-1.67)	0.213 (-1.03)
No income	Base	Base
R 0 - R3500	4.000 (0.86)	0.262 (-1.11)
R 3501 - R7500	0.486 (-0.50)	875434.7 (0.01)
R 7501 - R15 000	3.660 (0.73)	0.778 (-0.17)
R 15 001 - R30 000	3.990 (0.89)	1.704 (0.38)
R 30 001 - R75 000	1.674 (0.34)	0.520 (-0.46)
R 75 001 - R150 000	82066483.7 (0.00)	573172.5 (0.01)
R 150 001 or more	1.192 (0.11)	0.535 (-0.42)
N	236	225

*p<0.1 , ** p<0.05, *** p<0.01

Model 4: Importance of functions	Favourite	Most freq. visited
Community park	Base outcome	Base outcome
Beach		
Internal peace	0.282** (-2.11)	0.739 (-0.43)
Economics	1.240 (0.40)	0.747 (-0.46)
Environment	0.996 (-0.01)	0.343* (-1.91)
Culture	1.565 (1.10)	1.460 (0.81)
Family	1.556 (1.30)	1.552 (1.10)
District park		
Inner peace	1.279 (0.38)	1.769 (0.80)
Economics	1.219 (0.36)	0.988 (-0.02)
Environment	1.095 (0.19)	0.543 (-1.08)
Culture	1.292 (0.61)	1.298 (0.58)
Family	1.656 (1.44)	1.617 (1.27)
Nature reserve		
Inner peace	0.472 (-1.13)	0.675 (-0.59)
Economics	0.929 (-0.13)	0.761 (-0.44)
Environment	2.806* (1.88)	0.882 (-0.22)
Culture	0.570 (-1.26)	0.958 (-0.10)
Family	2.663** (2.33)	1.750 (1.48)
N	237	252

*p<0.1 , ** p<0.05, *** p<0.01

Internal peace=Internal peace and external image;
Family=Family and socializing

Appendix 11: Most frequently visited UGS per neighbourhood

Lavender Hill

	%	% cum.	Type
1. Muizenberg Beach	22.22	22.22	B
2. Zandvlei District Park	22.22	44.44	DP
3. The Company's Gardens	19.44	63.88	DP
4. Wynberg Park	8.33	72.21	DP
5. Arderne Gardens	2.78	74.99	DP

Seawinds

	%	% cum.	Type
1. Zandvlei District Park	30	30	DP
2. Muizenberg Beach	20	50	B
3. Arderne Gardens	10	60	DP
4. Kirstenbosch Gardens	10	70	R
5. Mossie Street Park	10	80	CP

Capricorn/Vrygrond

	%	% cum.	Type
1. Muizenberg Beach	48	48	B
2. Park Island CP	8	56	CP
3. Arderne Gardens	4	60	DP
4. Gordon's Bay Beach	4	64	B
5. Green Point Park	4	68	DP
6. Muizenberg East	4	72	R
7. Muizenberg Park	4	76	CP

Steenberg/Retreat

	%	% cum.	Type
1. Muizenberg Beach	17.24	17.24	B
2. Fish Hoek	10.34	27.58	B
3. Zandvlei District Park	10.34	37.92	DP
4. Newlands Forest	6.9	44.82	R
5. St James	6.9	51.72	B
6. Arderne Gardens	3.45	55.17	DP
7. Camps Bay	3.45	58.62	B
8. De Waal Park Upper	3.45	62.07	DP
9. False Bay - Pelican P	3.45	65.52	R
10. Green Point Park	3.45	68.97	DP
11. Houtbay Beach	3.45	72.42	B
12. Kirstenbosch Gardens	3.45	75.87	R

Muizenberg

	%	% cum.	Type
1. Muizenberg Beach	31.25	31.25	B
2. Zandvlei District Park	14.58	45.83	DP
3. Green Point Park	12.5	58.33	DP
4. Table Mountain - SMD	6.25	64.58	R
5. Muizenberg East	4.17	68.75	R
6. Table Mountain	4.17	72.92	R
7. Arderne Gardens	2.08	75	DP

Lakeside

	%	% cum.	Type
1. Tokai Forest	19.05	19.05	R
2. Zandvlei District Park	19.05	38.1	DP
3. Muizenberg Beach	14.29	52.39	B
4. Kirstenbosch Gardens	9.52	61.91	R
5. Table Mountain - SMD	9.52	71.43	R
6. Zandvlei Estuary	9.52	80.95	R

Marina da Gama

	%	% cum.	Type
1. Park Island CP	33.33	33.33	CP
2. Muizenberg Beach	23.81	57.14	B
3. Zandvlei District Park	11.9	69.04	DP
4. Boulders Beach	4.76	73.8	B
5. Constantia Greenbelt	2.38	76.18	GB

*B=beach; DP=district park; R=nature reserve; CP=community park; GB=greenbelt | SDA=Silvermine Dam Area

Appendix 12: Negative attributes of two most popular UGSs per UGS-type

a. Beaches

Muizenberg Beach (70 unique cases)		
	Freq.	% of responses
Scary/unsafe	37	20
No negative factors	13	16.21
Crowded	26	14.06
Far from home	19	11.19
Dark/hiding places	14	7.57

Fish Hoek (11 unique cases)		
	Freq.	% of responses
No negative factors	6	28.57
Far from home	3	14.29
Scary/unsafe	2	4.76
Noisy /unpeaceful	2	4.67
Crowded	2	4.67
Other	2	4.67

b. Community parks

Park Island CP (22 unique cases)		
	Freq.	% of responses
No negative factors	8	15.39
Dark/hiding places	7	13.46
Far from home	6	11.54
Scary/unsafe	6	11.54
Lack hist./cult./symb. iden.	5	9.62
Dirty/disorderly/littered	5	9.62

Muizenberg Park (5 unique cases)		
	Freq.	% of responses
No negative factors	5	83.33
Dirty/disorderly/littered	1	16.67

c. District parks

Zandvlei District Park (37 unique cases)		
	Freq.	% of responses
No negative factors	16	17.02
Far from home	11	11.7
Scary/unsafe	11	11.7
Lack of facilities	9	9.57
Neglected facilities	8	8.52

Green Point Park (22 unique cases)		
	Freq.	% of responses
Far from home	22	28.57
Crowded	11	14.28
Scary/unsafe	8	10.38
Lack of facilities	6	7.79
No negative factors	4	5.19
Expensive	4	5.19
Dark/hiding places	4	5.19
Lack hist./cult./symb. iden.	4	5.19
Lack opport. for activities	4	5.19

d. Nature reserves

Kirstenbosch Gardens (27 unique cases)		
	Freq.	% of responses
No negative factors	11	20.37
Far from home	10	18.52
Expensive	8	14.81
Scary/unsafe	6	11.12
Crowded	5	9.26

Table Mountain – SDA (16 unique cases)		
	Freq.	% of responses
No negative factors	6	15.79
Crowded	5	13.16
Scary/unsafe	4	10.52
Dark/hiding places	4	10.52
Lack of facilities	3	7.89
Expensive	3	7.89

Appendix 13: ANOVA-analysis for positive and negative attributes of the favourite and most frequently visited UGS

	Dependent variable	White	Choose no clas.	Black African	Coloured	Constant	N
	Positive attributes of favourite UGS						
(6)	Easily accessible	Base	-0.204 (-1.92)	-0.540*** (-5.30)	-0.525*** (-9.65)	0.730*** (18.25)	291
(7)	Nice atmosphere	Base	-0.0728 (-0.63)	-0.609*** (-5.54)	-0.344*** (-5.87)	0.704*** (16.31)	291
(8)	Space and freedom	Base	-0.230* (-2.15)	-0.618*** (-6.04)	-0.522*** (-9.54)	0.809*** (20.09)	291
(9)	Convenient opening hours	Base	0.0641 (0.64)	-0.257** (-2.68)	-0.157** (-3.08)	0.304*** (8.08)	291
(10)	Peace and tranquillity	Base	-0.0201 (-0.18)	-0.561*** (-5.13)	-0.366*** (-6.27)	0.704*** (16.37)	291
(11)	Opportunity for activities	Base	-0.242* (-2.22)	-0.357*** (-3.41)	-0.246*** (-4.41)	0.452*** (11.01)	291
(12)	Beautiful landscape/views	Base	-0.221* (-2.01)	-0.657*** (-6.23)	-0.447*** (-7.94)	0.800*** (19.31)	291
(13)	Safe	Base	-0.0654 (-0.58)	-0.492*** (-4.52)	-0.282*** (-4.85)	0.539*** (12.62)	291
(14)	Good facilities	Base	0.0467 (0.43)	-0.274** (-2.65)	-0.0938 (-1.70)	0.322*** (7.92)	291
(15)	Chance see wildl./bird/plant	Base	-0.215* (-1.97)	-0.435*** (-4.17)	-0.339*** (-6.09)	0.530*** (12.93)	291
(16)	Open/unclutt./visible space	Base	0.0485 (0.44)	-0.435*** (-4.08)	-0.317*** (-5.57)	0.530*** (12.66)	291
(17)	Posit. childhood associations	Base	0.00229 (0.02)	-0.261** (-2.69)	-0.0550 (-1.06)	0.261*** (6.83)	291
(18)	Historical/cult./symb. ident.	Base	-0.113 (-1.44)	-0.118 (-1.57)	-0.0770 (-1.92)	0.165*** (5.60)	291
(19)	Other	Base	-0.0174 (-0.37)	0.0778 (1.72)	0.0341 (1.41)	0.0174 (0.98)	291
(20)	Fresh and clean air	Base	-0.0174 (-0.43)	-0.0174 (-0.45)	0.0267 (1.29)	0.0174 (1.14)	291
(21)	Breeze, shade and cooling	Base	-	0.0476 (1.72)	0.0221 (1.50)	-	291
(22)	Clean	Base	-0.0174 (-0.32)	0.0302 (0.58)	0.0708* (2.54)	0.0174 (0.85)	291
(23)	Green	Base	-	0.0476 (1.02)	0.0809** (3.25)	-	291
(24)	Diff. kinds/friendly people	Base	-	0.143*** (3.75)	0.0368 (1.81)	-	291
(25)	Nice water	Base	-	-	0.00735 (0.99)	-	291

* p<0.05, ** p<0.01, *** p<0.001

	Dependent variable	White	Choose no clas.	Black African	Coloured	Constant	N
	Positive attributes of most frequently visited UGS						
(6)	Easily accessible	Base	-0.143 (-1.37)	-0.579*** (-5.80)	-0.54*** (-10.10)	0.722*** (-18.41)	291
(7)	Nice atmosphere	Base	0.0137 (-0.12)	-0.422*** (-3.78)	-0.271*** (-4.54)	0.565*** (-12.87)	291
(8)	Space and freedom	Base	-0.0641 (-0.58)	-0.553*** (-5.26)	-0.453*** (-8.07)	0.696*** (-16.84)	291
(9)	Convenient opening hours	Base	0.0293 (-0.31)	-0.292** (-3.18)	-0.244*** (-4.97)	0.339*** (-9.41)	291
(10)	Peace and tranquillity	Base	0.0403 (-0.35)	-0.401*** (-3.64)	-0.327*** (-5.55)	0.591*** (-13.65)	291
(11)	Opportunity for activities	Base	-0.216* (-2.02)	-0.378*** (-3.70)	-0.235*** (-4.30)	0.426*** (-10.61)	291
(12)	Beautiful landscape/views	Base	-0.0815 (-0.70)	-0.523*** (-4.71)	-0.345*** (-5.83)	0.713*** (-16.35)	291
(13)	Safe	Base	0.0215 (-0.19)	-0.405*** (-3.79)	-0.224*** (-3.93)	0.452*** (-10.78)	291
(14)	Good facilities	Base	-0.0682 (-0.71)	-0.178 (-1.93)	-0.0496 (-1.01)	0.226*** (-6.24)	291
(15)	Chance see wildl./bird/plant	Base	-0.127 (-1.22)	-0.448*** (-4.47)	-0.349*** (-6.52)	0.496*** (-12.59)	291
(16)	Open/unclutt./visible space	Base	0.0307 (-0.28)	-0.400*** (-3.88)	-0.327*** (-5.92)	0.496*** (-12.21)	291
(17)	Posit. childhood associations	Base	0.0632 -0.69	-0.200* (-2.28)	-0.0529 (-1.13)	0.200*** (-5.81)	291
(18)	Historical/cult./symb. ident.	Base	-0.0604 (-0.90)	-0.113 (-1.77)	-0.0469 (-1.37)	0.113*** (-4.49)	291
(19)	Other	Base	-0.0174 (-0.38)	0.0302 (-0.7)	0.0341 (-1.47)	0.0174 (-1.02)	291
(20)	Fresh and clean air	Base	-0.0174 (-0.40)	0.0302 (-0.73)	0.0267 (-1.22)	0.0174 (-1.07)	291
(21)	Breeze, shade and cooling	Base	-	0.0476 (-1.55)	0.0294 (-1.79)	-	291
(22)	Clean	Base	-0.0261 (-0.49)	-0.0261 (-0.52)	0.0548* (-2.03)	0.0261 (-1.31)	291
(23)	Green	Base	-	-	0.0515** (-2.67)	-	291
(24)	Diff. kinds/friendly people	Base	-	0.0476 (-1.31)	0.0441* (-2.28)	-	291
(25)	Nice water	Base	-	0.0476 (-1.31)	0.0441* (-2.28)	-	291

* p<0.05, ** p<0.01, *** p<0.001

	Dependent variable	White	Choose no clas.	Black African	Coloured	Constant	N
	Negative attributes of favourite UGS						
(6)	Crowded	Base	0.0453 (-0.51)	-0.118 (-1.39)	-0.0255 (-0.57)	0.165*** (-4.98)	291
(7)	Difficult to access	Base	0.0352 (-0.92)	-0.0174 (-0.48)	0.012 (-0.62)	0.0174 (-1.21)	291
(8)	Expensive	Base	-0.087 (-1.50)	-0.087 (-1.56)	-0.0355 (-1.19)	0.087*** (-3.98)	291
(9)	Dark/hiding places	Base	-0.0513 (-0.67)	-0.109 (-1.49)	-0.0830* (-2.13)	0.157*** (-5.45)	291
(10)	Not in natural state	Base	-0.0087 (-0.30)	-0.0087 (-0.31)	0.0134 (-0.9)	0.0087 (-0.8)	291
(11)	Visually unappealing	Base	-0.0087 (-0.42)	-0.0087 (-0.44)	-0.00134 (-0.13)	0.0087 (-1.12)	291
(12)	Little different functions	Base	0.0352 (-0.87)	0.0302 (-0.78)	0.012 (-0.58)	0.0174 (-1.14)	291
(13)	Unused/deserted	Base	0.0526* (-2.58)	-	0.00735 (-0.71)	-	291
(14)	Neglected natural space	Base	-0.0435 (-1.01)	0.00414 (-0.1)	-0.0214 (-0.97)	0.0435** (-2.68)	291
(15)	Neglected facilities	Base	-0.0522 (-0.98)	-0.0522 (-1.02)	0.00665 (-0.24)	0.0522** (-2.61)	291
(16)	Unpleasant atmosphere	Base	-0.0174 (-0.43)	-0.0174 (-0.45)	0.0267 (-1.29)	0.0174 (-1.14)	291
(17)	No histor./cult./symb. ident.	Base	0.0265 (-0.54)	-0.0261 (-0.55)	0.0327 (-1.3)	0.0261 (-1.4)	291
(18)	Lacks opport. for activities	Base	-0.0082 (-0.15)	-0.0609 (-1.15)	-0.0094 (-0.33)	0.0609** (-2.94)	291
(19)	Inconvenient opening hours	Base	-0.0087 (-0.60)	-0.0087 (-0.62)	-0.0087 (-1.17)	0.0087 (-1.59)	291
(20)	Other	Base	-0.0087 (-0.27)	-0.0087 (-0.28)	0.0207 (-1.25)	0.0087 (-0.72)	291
	Activities I dislike						291
(21)	(alcohol/braai/pray)	Base	-0.0087 (-0.27)	-0.0087 (-0.28)	0.0207 (-1.25)	0.0087 (-0.72)	
(22)	Dogs	Base	-0.0174 (-0.60)	0.0302 (-1.09)	-0.01 (-0.68)	0.0174 (-1.6)	291
(23)	Dangerous nature	Base	-	-	0.00735 (-0.99)	-	291
(24)	Dirty, disorderly, littered	Base	-0.0609 (-1.43)	-0.0133 (-0.32)	-0.0535* (-2.45)	0.0609*** (-3.79)	291

* p<0.05, ** p<0.01, *** p<0.001

	Dependent variable	White	Choose no clas.	Black African	Coloured	Constant	N
	Negative attributes of most frequently visited UGS						
(6)	Crowded	Base	-0.0513 (-0.64)	-0.109 (-1.41)	-0.0536 (-1.30)	0.157*** (5.15)	291
(7)	Difficult to access	Base	0.0526 (1.83)	-	0.0221 (1.50)	-	291
(8)	Expensive	Base	0.0439 (1.02)	0.0389 (0.95)	0.0354 (1.61)	0.00870 (0.54)	291
(9)	Dark/hiding places	Base	-0.0691 (-1.02)	-0.122 (-1.87)	-0.0556 (-1.60)	0.122*** (4.75)	291
(10)	Not in natural state	Base	-0.0435 (-0.96)	-0.0435 (-1.00)	-0.00671 (-0.29)	0.0435* (2.55)	291
(11)	Visually unappealing	Base	-0.0348 (-1.21)	-0.0348 (-1.26)	-0.0348* (-2.37)	0.0348** (3.22)	291
(12)	Little different functions	Base	0.0178 (0.51)	-0.0348 (-1.03)	-0.0274 (-1.52)	0.0348** (2.62)	291
(13)	Unused/deserted	Base	-0.0348 (-1.21)	-0.0348 (-1.26)	-0.0348* (-2.37)	0.0348** (3.22)	291
(14)	Neglected natural space	Base	0.00046 (0.01)	-0.0522 (-1.10)	-0.0154 (-0.61)	0.0522** (2.80)	291
(15)	Neglected facilities	Base	-0.0696 (-1.27)	-0.0696 (-1.32)	-0.0181 (-0.64)	0.0696*** (3.37)	291
(16)	Unpleasant atmosphere	Base	-0.0087 (-0.35)	-0.00870 (-0.36)	0.00601 (0.47)	0.00870 (0.92)	291
(17)	No histor./cult./symb. ident.	Base	0.0352 (0.78)	-0.0174 (-0.40)	0.0341 (1.47)	0.0174 (1.02)	291
(18)	Lacks opport. for activities	Base	-0.0082 (-0.17)	-0.0609 (-1.29)	-0.0315 (-1.25)	0.0609** (3.27)	291
(19)	Inconvenient opening hours	Base	-	-	-	-	291
(20)	Other	Base	-0.0087 (-0.30)	-0.0087 (-0.31)	0.0134 (0.90)	0.00870 (0.80)	291
	Activities I dislike						
(21)	(alcohol/braai/pray)	Base	-0.0087 (-0.27)	-0.0087 (-0.28)	0.0207 (1.25)	0.00870 (0.72)	291
(22)	Dogs	Base	-0.0174 (-0.60)	0.0302 (1.09)	-0.0100 (-0.68)	0.0174 (1.60)	291
(23)	Dangerous nature	Base	-	-	0.00735 (0.99)	-	291
(24)	Dirty, disorderly, littered	Base	-0.0696 (-1.55)	-0.0696 (-1.62)	-0.0549* (-2.39)	0.0696*** (4.12)	291

* p<0.05, ** p<0.01, *** p<0.001

Appendix 14: UGS-visits

	Favourite		Most frequently v.		Total		
	Median	Mean	Median	Mean	Median	Mean	N
Gender							
Male	12	70.25	52	107.24	55	122.73	99
Female	12	56.25	28	101.40	55	132.37	192
Age							
20-24 years	24	44.53	25	53.28	52	87.68	19
25-29 years	18	44.67	52	93.00	69	120.83	24
30-34 years	8	19.47	18	69.81	29	92.47	19
35-39 years	12	25.23	24	72.16	24	95.96	27
40-44 years	12	39.88	15	79.65	27	102.38	36
45-49 years	12	65.06	24	91.93	40	120.22	32
50-54 years	21	76.32	78	131.28	66.5	136.36	23
55-59 years	18	102.50	52	128.76	76.5	158.69	26
60-64 years	25	81.13	104	162.77	64	178.49	33
65-69 years	12	95.11	52	142.41	116	167.47	21
70-74 years	12	35.86	18	90.57	42	153.57	7
75-79 years	24	58.78	24	60.11	25	76.00	9
80+ years	365	248.33	365	248.33	367	271.33	3
Highest completed education							
No education	1.5	92.00	3	92.75	5	119.75	4
Primary School (Grade 1-7)	9	51.00	52	102.57	59.5	104.12	26
Second. School (Grade 8-10)	12	19.98	24	44.90	27	53.62	52
Second. School (Grade 11-12)	12	42.42	12	54.34	20	71.21	67
National Diploma	52	108.74	52	128.92	104	166.02	51
Bachelor's Degree	24	70.24	52	134.35	76	183.22	51
Master's Degree	15	61.64	130	189.56	156	230.42	26
Doctorate	41	79.60	130	136.90	147.5	174.80	10
Employment status							
Employed	12	47.06	30	86.38	53	116.79	108
Self-employed	24	107.89	52	136.22	78	167.96	53
Studying	12	21.79	52	87.15	69	110.86	14
Unemployed	4.5	30.06	12	75.42	24	80.80	39
Housewife	12	14.80	19.5	20.43	24	35.27	15
Retired	18	85.22	102	151.02	116	179.22	53
Other	10.5	11.50	24	26.33	18	29.20	5
Marital status							
Married	12	74.16	52	123.12	55	144.27	138
Living together	24	55.70	113	138.77	188	206.26	23
Widower/widow	27	68.50	27	90.43	47	109.71	16
Separated/divorced	4	63.77	52	111.62	62	117.76	35
In a relationship	24	39.19	36	36.15	76	76.25	16
Single/never married	12	30.88	24	58.56	24	81.39	60
Household size							
1	12	92.12	91	134.77	128	167.22	27
2	29	91.60	104	150.75	116	200.75	74
3	12	71.02	52	121.53	64	149.26	43
4	12	35.47	24	62.60	34	73.98	53
5	6	22.57	24	56.73	24	75.86	46
6	24	71.38	19	75.33	195	70.21	14
7	5	27.13	9	30.38	10.5	33.88	8
8 or more	12	37.77	24	109.58	58	118.62	14
Children							
No children	24	69.49	52	122.21	71	143.24	76
1	21	69.56	52	121.47	88	165.50	53
2	12	56.76	27	96.97	54	118.69	76

3	12	55.09	24	85.09	36	107.23	47
4	4	38.06	18	88.28	26	89.60	21
More than 4	9	38.92	12	49.73	39.5	74.08	14
Religion							
Christianity	12	54.96	24	88.57	36	105.95	193
Atheist, agnostic, no religion	27	82.34	104	149.47	126	199.94	64
Islam	12	39.25	52	56.87	54	63.53	20
Judaism	130	130.00	286.5	286.50	373.5	373.50	2
Spiritual	24	53.60	45	111.50	87	200.40	5
Race							
Choose not to classify	19.5	77.72	38	146.22	72	194.89	19
Black African	12	28.33	12	36.75	12	43.38	21
Coloured	12	31.49	24	56.80	24	69.50	136
White	30	98.49	104	156.67	145	200.75	115
Household income							
No income	24	68.62	24	71.54	40	88.07	14
R 0 – 3500	6	29.37	24	66.69	30	76.28	78
R 3501 – 7500	12	16.14	19.5	37.50	24	51.40	30
R 7501 – 15 000	13	76.44	24	100.00	48	120.52	28
R 15 001 – 30 000	39	101.89	52	137.96	95.5	197.63	46
R 30 001 – 75 000	28	93.42	104	151.30	156	187.79	49
R 75 001 – 150 000	30	34.89	52	120.33	69	168.44	9
R 15 001 or more	12	54.03	24	112.49	46	133.65	57
Opport. to visit UGS as child							
No	6	48.20	24	66.03	24	86.95	61
Yes, but not at all often	21	57.59	24	98.19	48	140.46	22
Yes, occasionally	12	61.08	27	99.57	52	119.76	64
Yes, often	12	63.80	52	112.97	64	138.35	164
Garden							
No	12	36.05	12	52.38	18	69.21	81
Yes, <5m2	13.5	41.38	26	70.53	52	97.62	62
Yes, 5 - 15m2	24	69.36	52	135.71	78	164.19	61
Yes, 15 - 50m2	12	87.02	52	141.77	54	160.59	51
Yes, >50m2	24	92.38	130	164.30	157	205.41	33
Nationality							
Non-South African	15	67.12	52	114.29	64	135.09	60
South African	12	57.00	30	98.27	53.5	124.03	227
Neighbourhood							
Lavender Hill	6	13.67	12	32.59	12	41.04	57
Seawinds	24	25.27	30	35.70	36	48.00	11
Vrygrond/Capricorn	12	47.41	52	75.29	55	87.45	29
Steenberg/Retreat	9	44.59	24	72.39	55.5	100.03	33
Sheraton Park/Coniston Park	3	7.25	13.5	52.17	18.5	50.38	8
Kirstenhof	26	26.00	26	26.00	76	76.00	2
Muizenberg	12	72.94	52	128.18	128	186.39	51
Lakeside	29	87.91	78	137.86	104	169.44	23
Marina da Gama	52	125.68	143	182.98	209	241.77	44

*Medians are sometimes not integers - because if people indicated a visit frequency of for ex. 3-4 times a year, 3.5 was taken

Appendix 15: Odds ratios of potential predictors of visiting UGS at least once a week, continued

	(5)	(6)
Dist. to favourite		0.961 (-1.46)
Dist. to most freq.		0.917*** (-3.15)
Dist. to nearest		0.00767 (-1.33)
Neighbourhood		
Lavender Hill		Base
Seawinds		3.011 (0.98)
Vrygr./Capricorn		14.57*** (3.07)
Steenberg/Retrea t		9.746** (2.54)
Sher. P./Conist. P.		2.221 (0.49)
Muizenberg		24.01*** (2.97)
Lakeside		7.670* (1.77)
Marina da Gama		9.039* (1.80)
Race		
White	Base	
Choose no class.	0.433 (-1.27)	
Black African	0.247* (-1.89)	
Coloured	0.303** (-2.21)	
Gender		
Male		Base
Female	1.035 (0.10)	1.030 (0.06)
UGS-visits as a child		
No		Base
Yes	0.831 (-0.38)	1.134 (0.16)
Income		
No income		Base
R0 - 3500	1.223 (0.26)	0.830 (-0.18)
R3501 - 7500	0.588 (-0.62)	0.361 (-0.89)
R7501 - 15 000	0.667 (-0.44)	0.560 (-0.47)
R15 001 - 30 000	0.900 (-0.12)	1.270 (0.20)
R30 001 - 75 000	0.928 (-0.08)	1.290 (0.20)
R75 001 - 150 000	0.634 (-0.40)	0.703 (-0.23)
R150 001 or more	0.453 (-0.83)	0.802 (-0.14)
Education		
No education		Base
Prim. School (1-7)	9.371* (1.70)	43.53* (1.68)
Sec. School (8-10)	4.487 (1.12)	36.39 (1.58)
Sec. School (11-12)	3.412 (0.91)	11.35 (1.06)
National Diploma	9.772 (1.60)	38.66 (1.51)
Bachelor's Degree	11.37* (1.68)	65.64* (1.72)
Master's Degree	16.70* (1.86)	52.34 (1.58)
Doctorate	10.23 (1.39)	13.69 (1.03)
Nationality		
Non-South African	Base	Base
South African	1.243 (0.53)	1.147 (0.25)
Employment status		
Employed	Base	Base
Self-employed	0.791 (-0.51)	0.471 (-1.13)
Studying	0.951 (-0.06)	0.756 (-0.26)
Unemployed	1.185 (0.30)	1.127 (0.15)
Housewife	0.333 (-1.39)	0.0931** (-2.20)
Retired	1.699 (0.94)	3.682 (1.47)
Other	0.226 (-1.14)	0.110 (-0.86)
Children		
No children	Base	Base
1	1.405 (0.67)	1.943 (0.91)
2	0.732 (-0.67)	0.680 (-0.57)
3	1.141 (0.24)	1.623 (0.62)
4	0.858 (-0.21)	1.644 (0.50)
More than 4	2.259 (0.89)	17.82** (2.14)
Religion		
Atheist/agnostic/no	Base	Base
Christianity	0.725 (-0.71)	0.791 (-0.34)
Islam	1.733 (0.72)	7.385 (1.54)
Spiritual	0.351 (-1.00)	0.148 (-1.37)
Number of people in hh	0.935 (-0.79)	0.857 (-1.22)
Age	0.993 (-0.45)	0.977 (-0.92)
N	255	192

* p<0.1, ** p<0.05, *** p<0.01

Appendix 16: Full list of purposes for visiting UGSs, % of cases

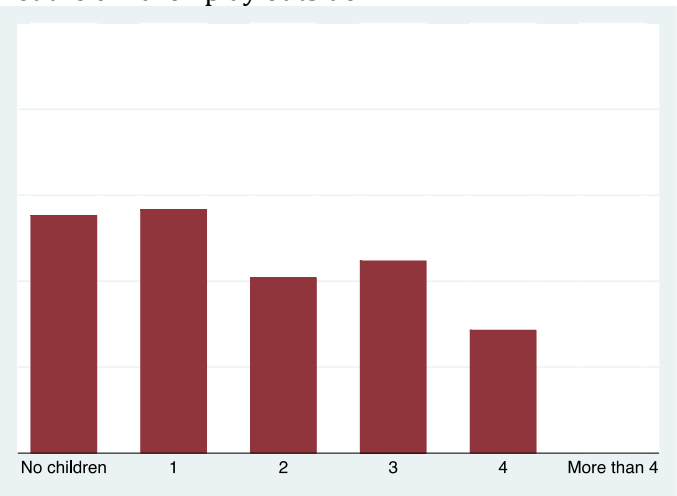
	B	CP	DP	R	S	UG	GB	Freq.
Walk/hike	50.35	60.47	43.62	66.67	0.00	0.00	75.00	184
Jog	9.79	11.63	8.51	7.94	0.00	0.00	25.00	33
Water sports	9.09	0.00	2.13	1.59	50.00	0.00	0.00	17
Other sports	4.20	2.33	4.26	9.52	50.00	0.00	25.00	19
Photograph	18.88	13.95	14.89	19.05	0.00	0.00	75.00	62
I work there	3.50	0.00	1.06	1.59	0.00	0.00	0.00	7
Have lunch outside	14.69	9.30	23.40	20.63	0.00	0.00	50.00	62
Braai or picnic	11.89	9.30	34.04	23.81	0.00	0.00	50.00	70
Enjoy natural beauty/views	58.04	53.49	47.87	65.08	0.00	50.00	100.00	197
Be with friends/family	40.56	44.19	51.06	57.14	0.00	50.00	75.00	165
Find or grow food/flowers	1.40	2.33	5.32	3.17	0.00	0.00	0.00	10
Meet new people/interact	7.69	16.28	17.02	9.52	0.00	0.00	0.00	40
See wildlife/birds/plants	25.17	41.86	29.79	46.03	0.00	50.00	75.00	115
Let the children play outside	28.67	27.91	40.43	26.98	0.00	50.00	75.00	112
Walk the dog	18.88	37.21	28.72	42.86	0.00	0.00	0.00	97
Get breath of fresh air	50.35	51.16	45.74	61.90	0.00	100.00	100.00	182
Feel connected to nature	43.36	44.19	37.23	60.32	0.00	50.00	100.00	159
Find shade and cooling	6.99	11.63	18.09	19.05	0.00	50.00	75.00	48
For festivities and events	15.38	9.30	20.21	15.87	0.00	0.00	0.00	55
Learn about nature and	11.89	6.98	11.70	19.05	0.00	0.00	75.00	46
Swim	11.89	0.00	2.13	0.00	50.00	0.00	0.00	20
Read	1.40	2.33	0.00	0.00	0.00	0.00	0.00	3
Look at people	4.20	2.33	1.06	0.00	0.00	0.00	0.00	8
Be alone/be with myself	4.20	0.00	0.00	0.00	0.00	0.00	0.00	6
Go for coffee or food	3.50	0.00	2.13	1.59	0.00	0.00	0.00	8
Pray/meditate/overthink life	2.10	9.30	1.06	0.00	0.00	0.00	0.00	8
Relax/get away from stressful	58.04	46.51	51.06	44.44	0.00	100.00	75.00	184
Other	4.20	6.98	2.13	1.59	0.00	0.00	0.00	12
Total	744	224	512	394	3	10	42	1929
Cases	143	43	94	63	2	2	4	351
Total %	**100**	**100**	**100**	**100**	**100**	**100**	**100**	

*B=Beach; CP=Community park; DP=District park; R=Nature reserve; S=Sport ground; U=Undeveloped green space; GB=Greenbelt

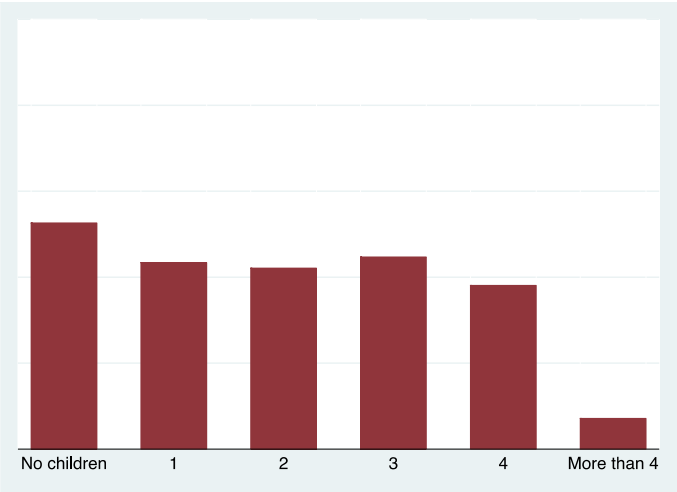
Appendix 17: Purposes of visiting favourite UGS

a. By number of children

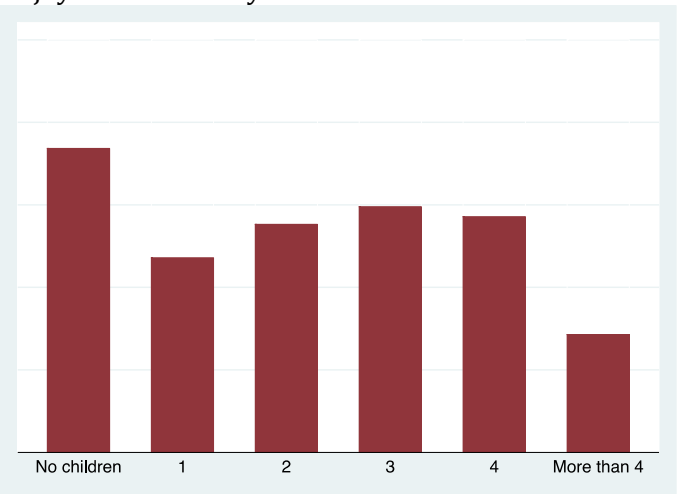
Let the children play outside



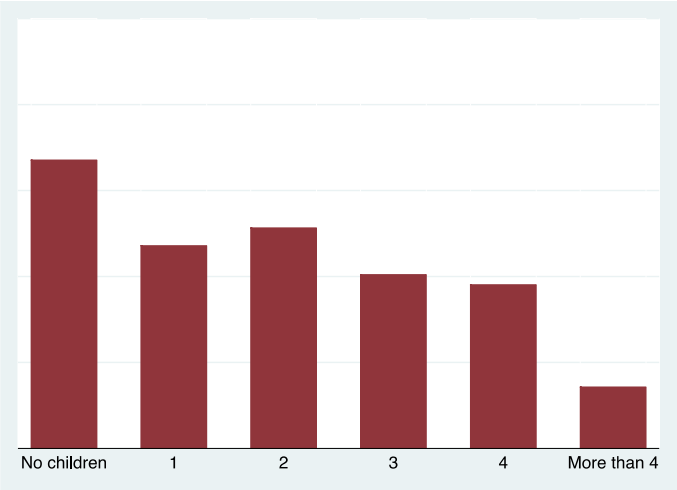
Feel connected to nature



Enjoy natural beauty and views

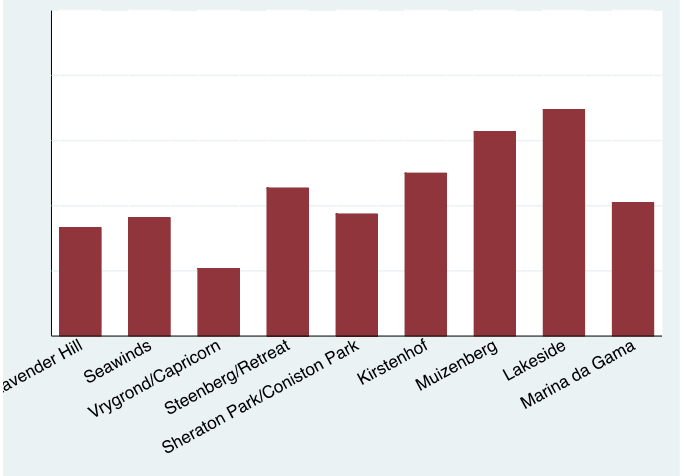


Walk or hike

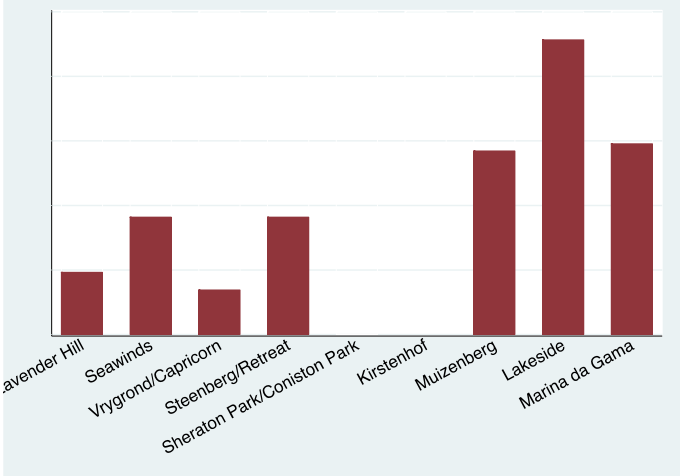


b. By neighbourhood

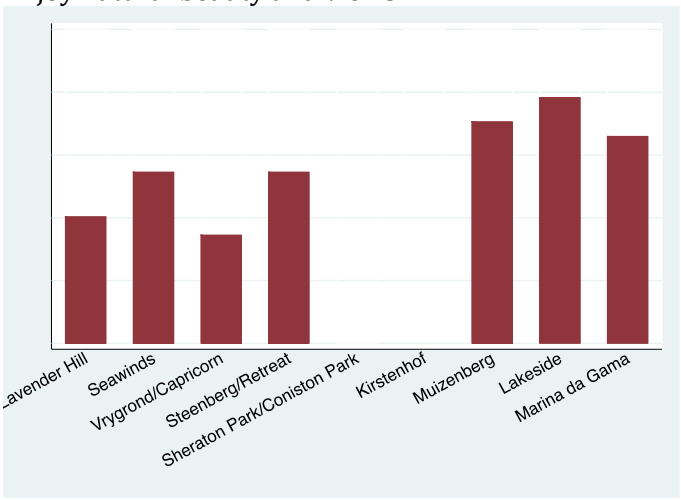
Be together with friends and family



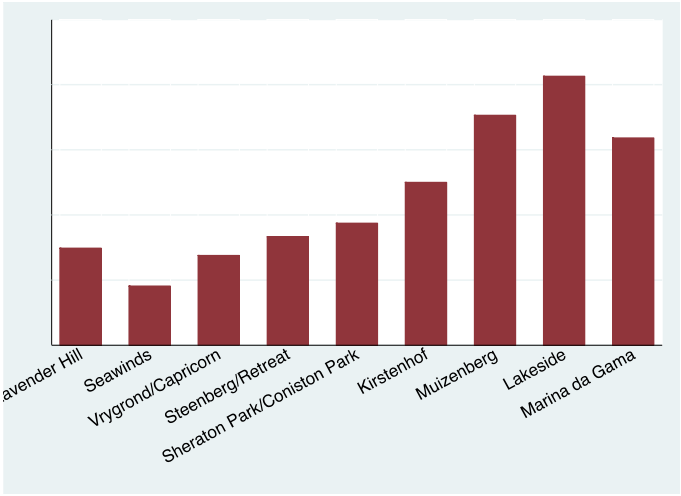
Feel connected to nature



Enjoy natural beauty and views

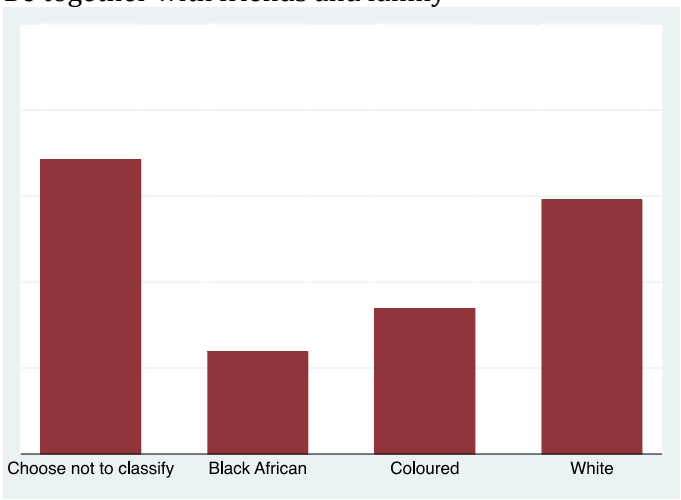


Walk or hike

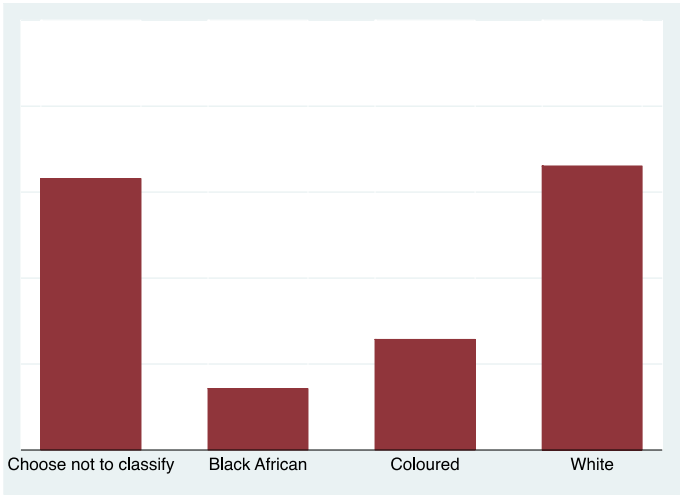


c. By race

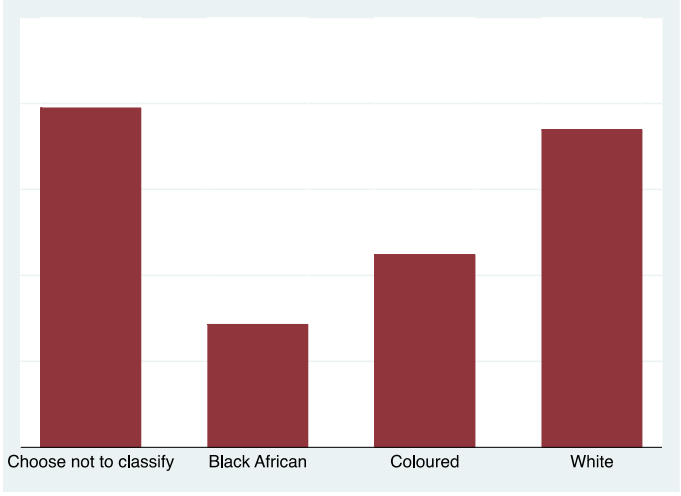
Be together with friends and family



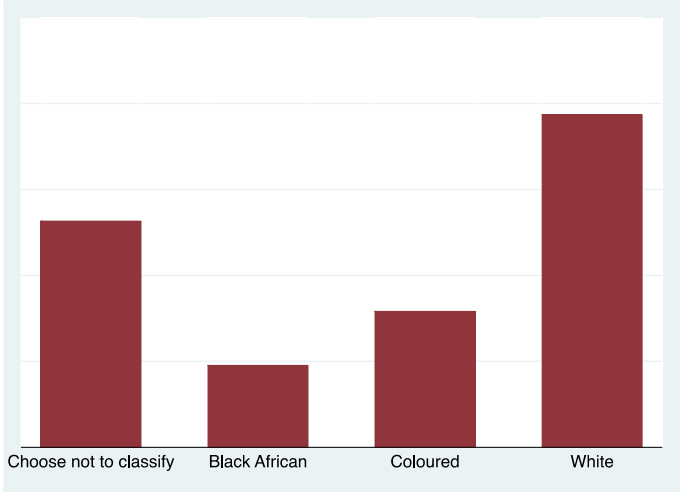
Feel connected to nature



Enjoy natural beauty and views

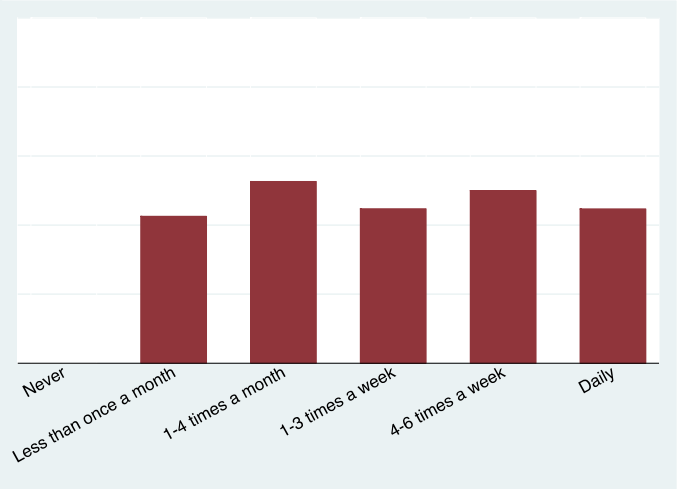


Walk or hike

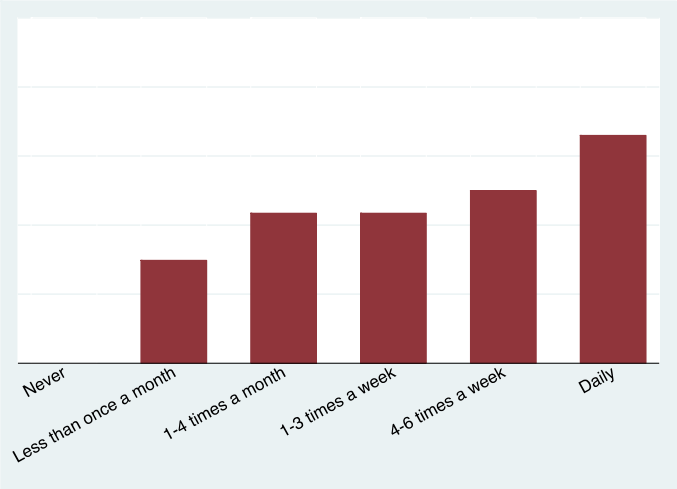


d. By visit frequency

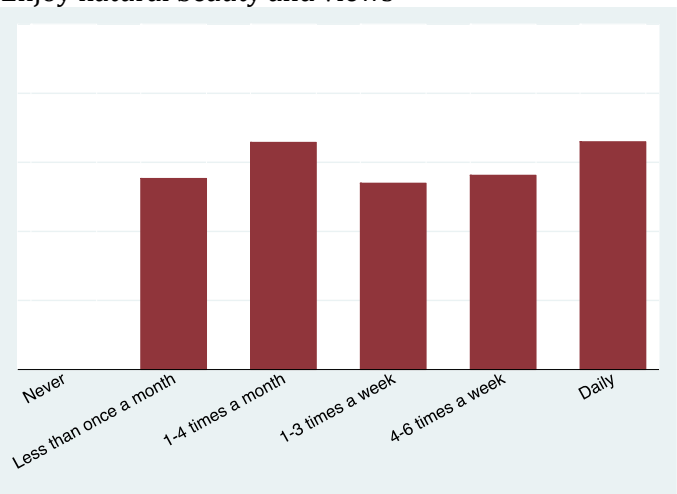
Be together with friends and family



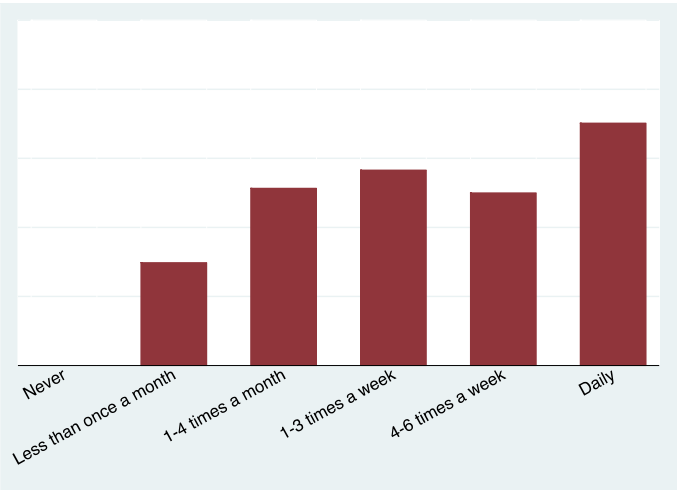
Feel connected to nature



Enjoy natural beauty and views

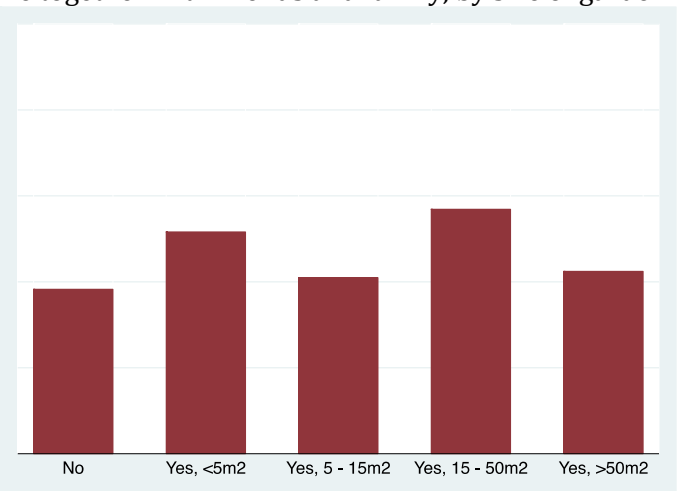


Walk or hike

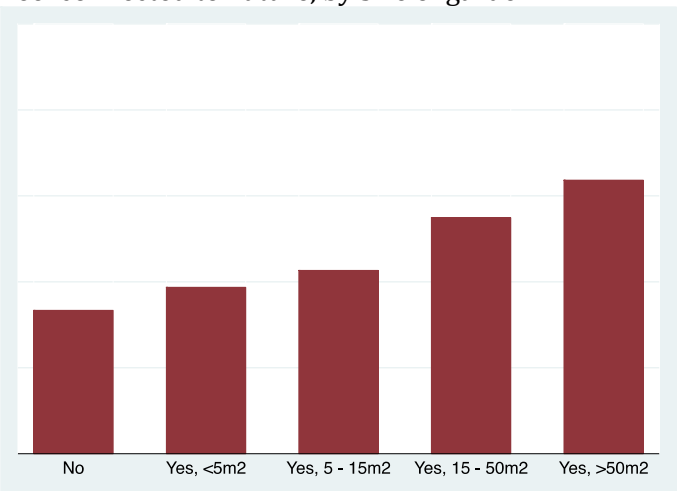


e. By size of garden

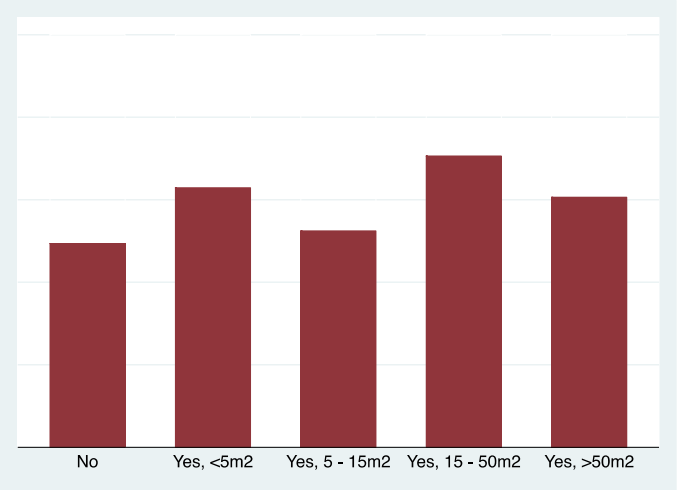
Be together with friends and family, by size of garden



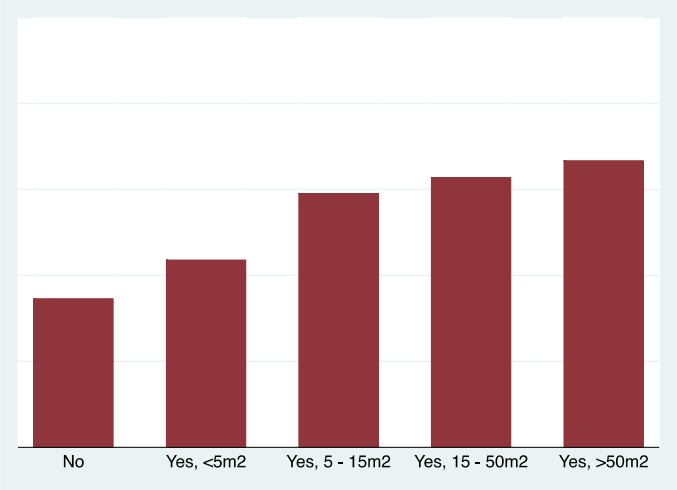
Feel connected to nature, by size of garden



Enjoy natural beauty and views, by size of garden

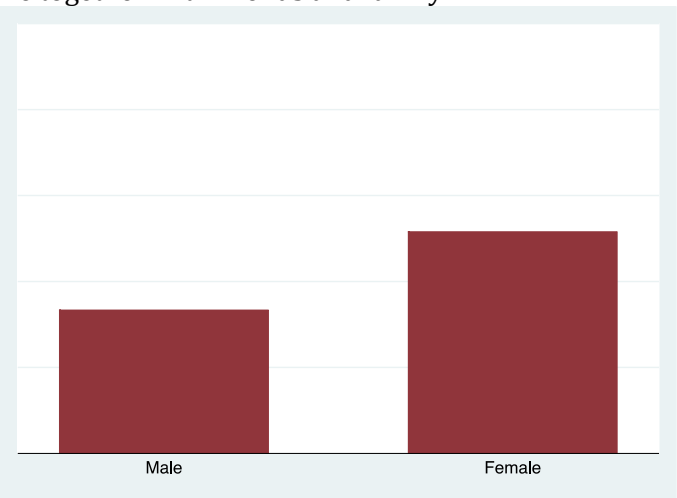


Walk or hike, by size of garden

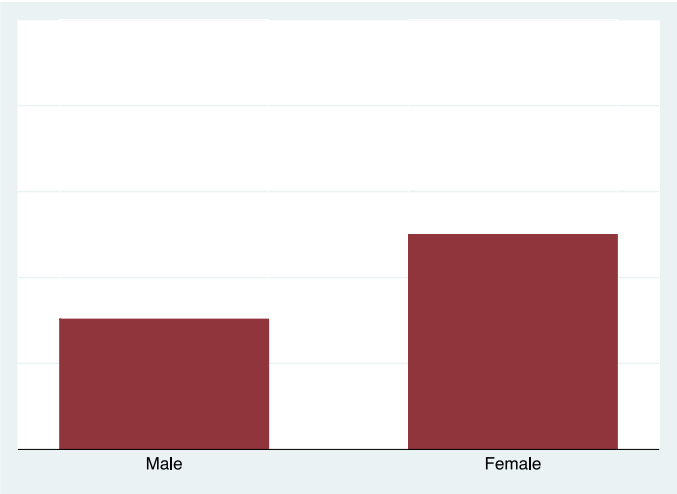


f. By gender

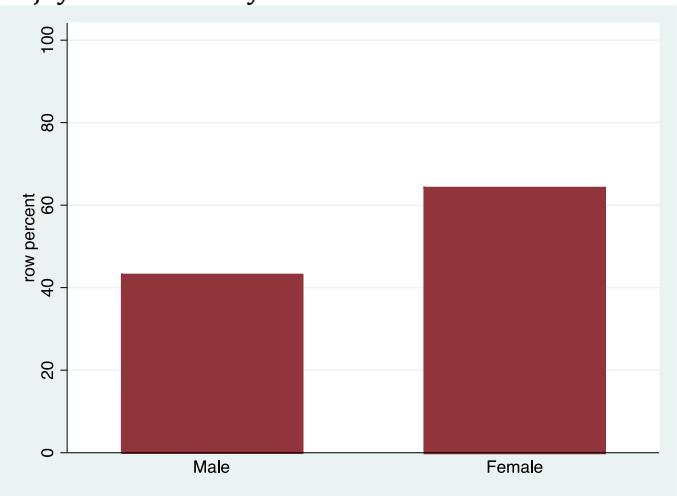
Be together with friends and family



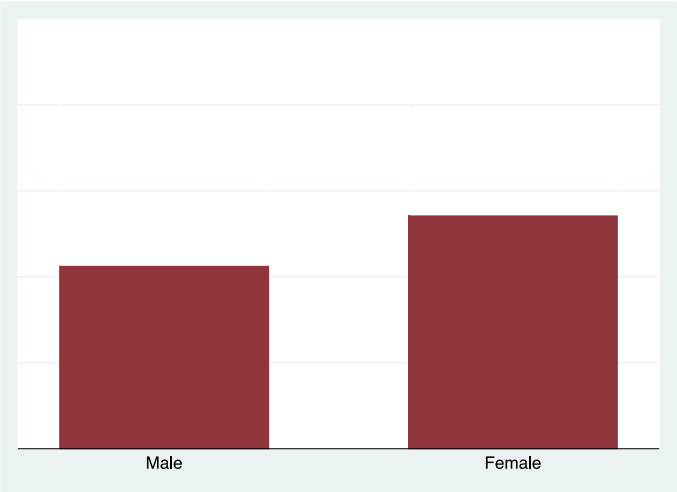
Feel connected to nature



Enjoy natural beauty and views



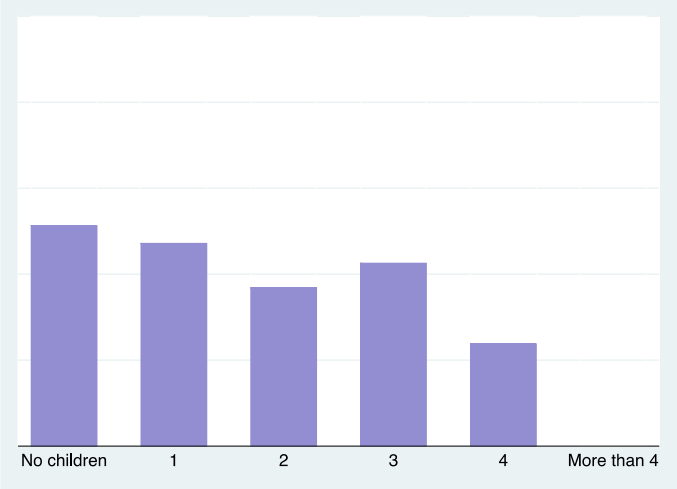
Walk or hike



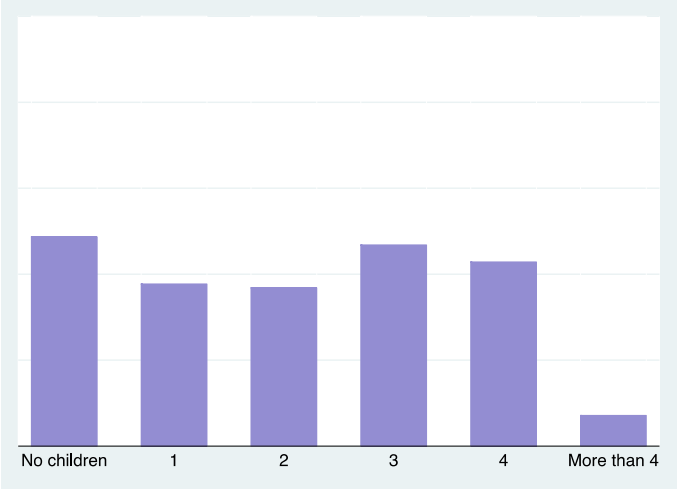
Appendix 18: Purposes of visiting most frequently visited UGS

a. By number of children

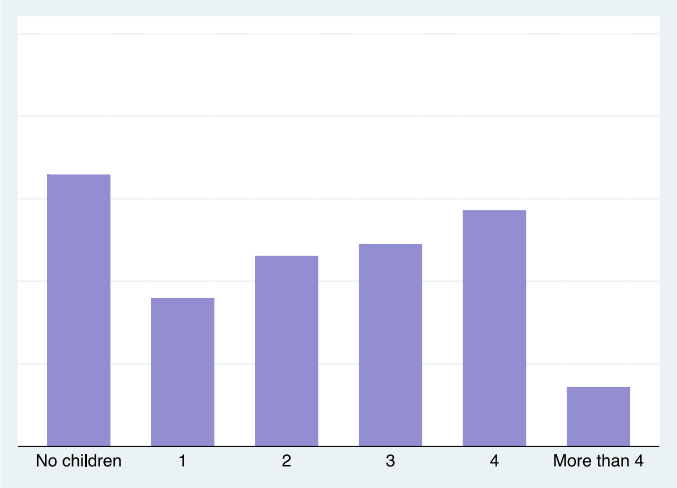
Be together with friends and family



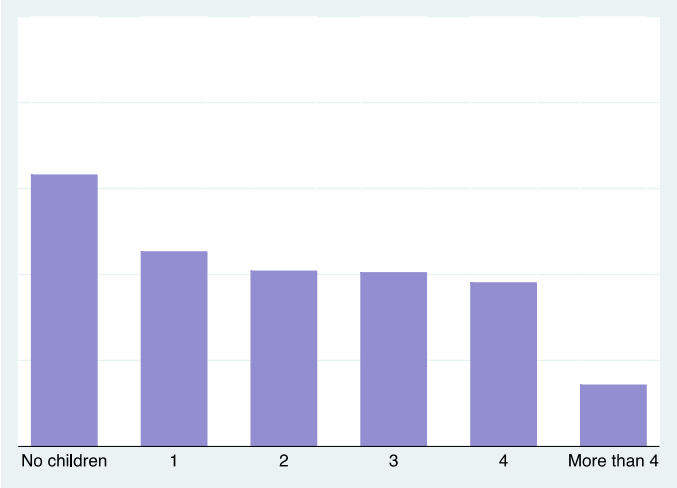
Feel connected to nature



Enjoy natural beauty and views

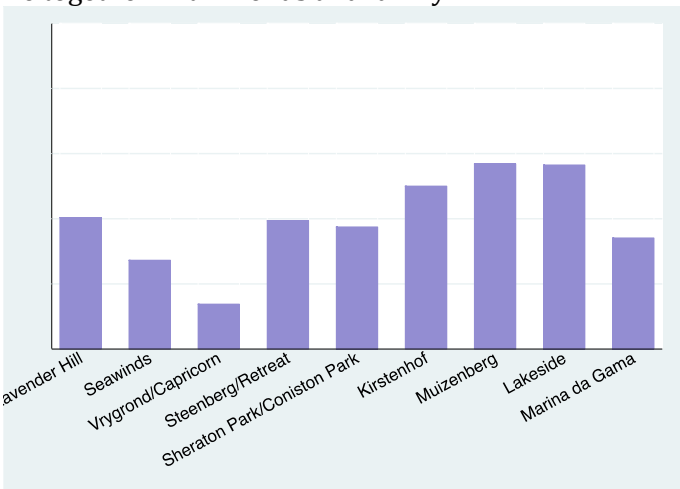


Hike or walk

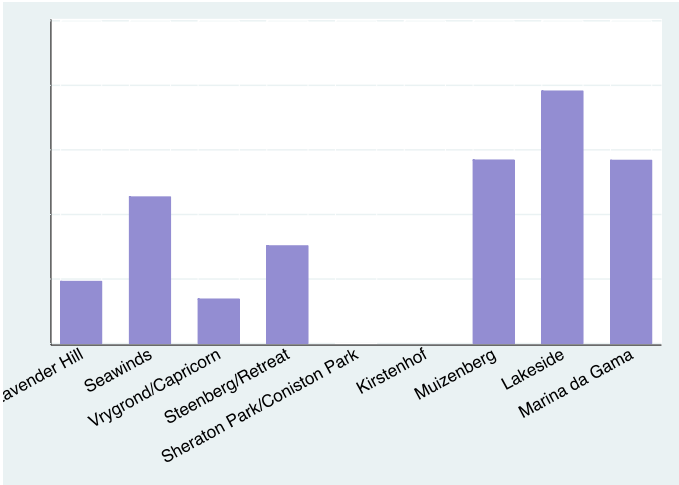


b. By neighbourhood

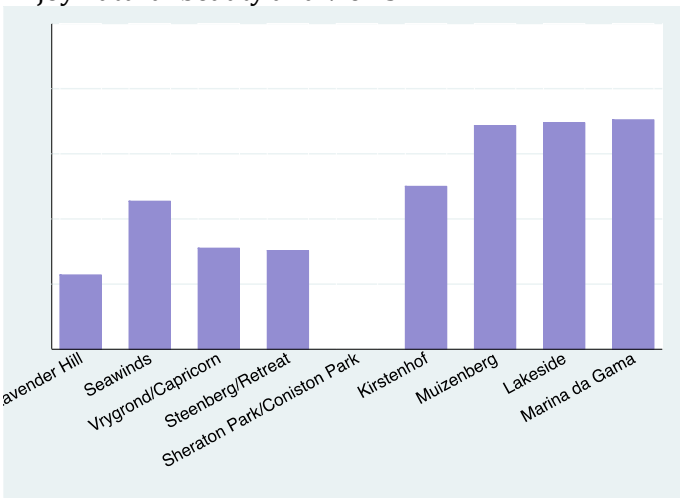
Be together with friends and family



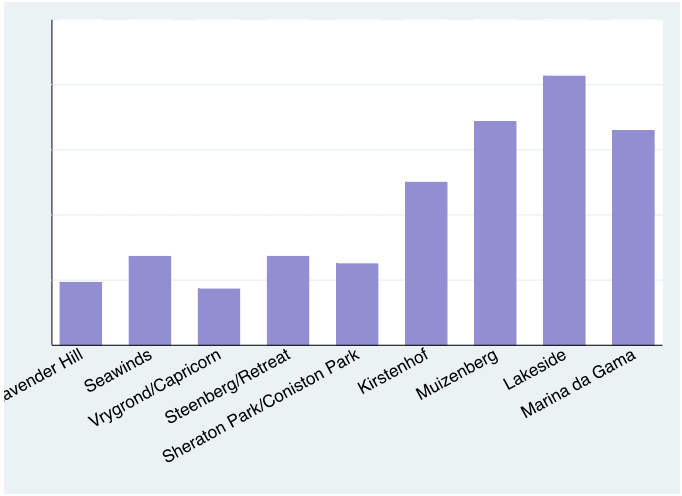
Feel connected to nature



Enjoy natural beauty and views

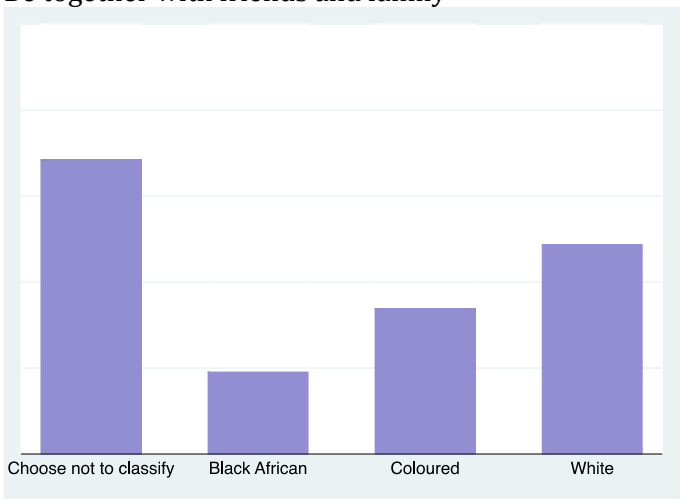


Hike or walk

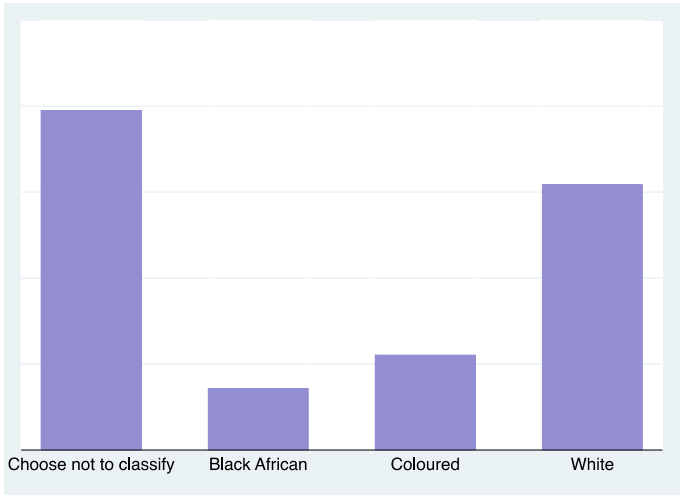


c. By race

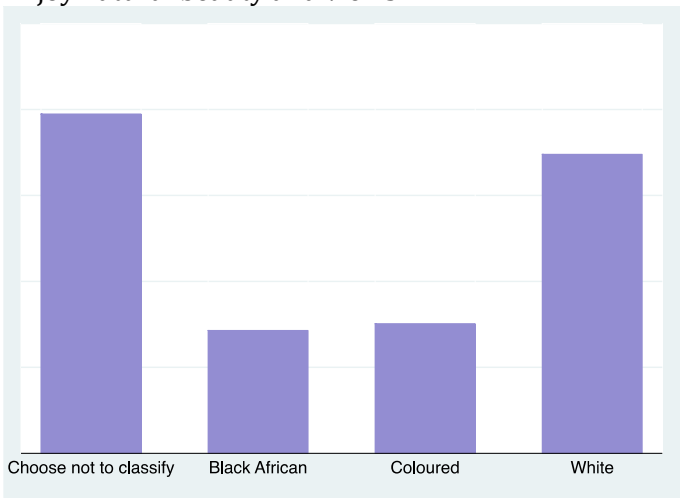
Be together with friends and family



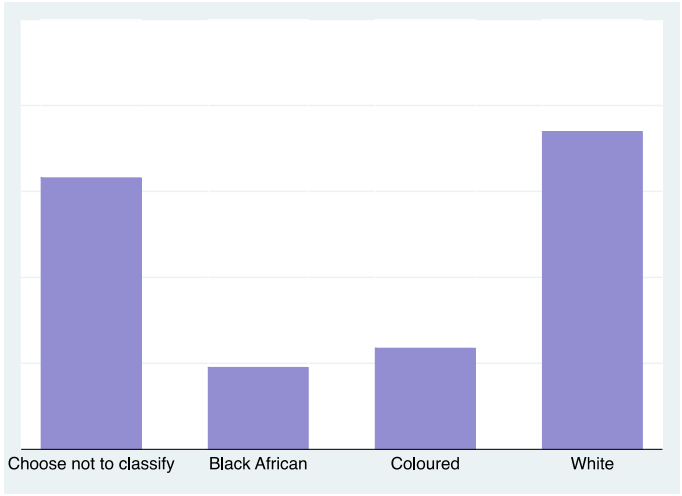
Feel connected to nature



Enjoy natural beauty and views

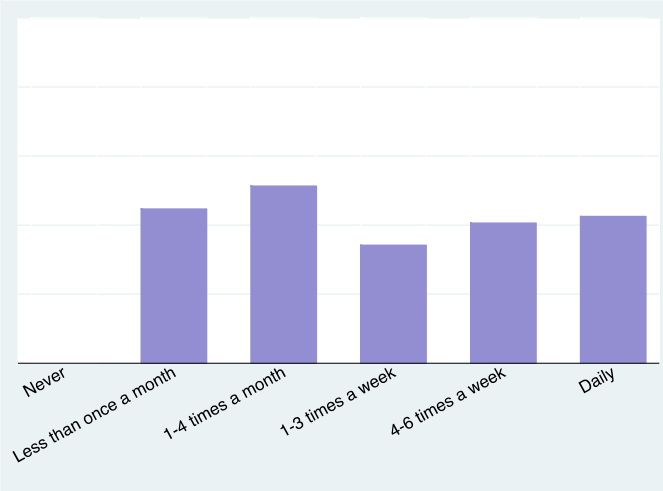


Hike or walk

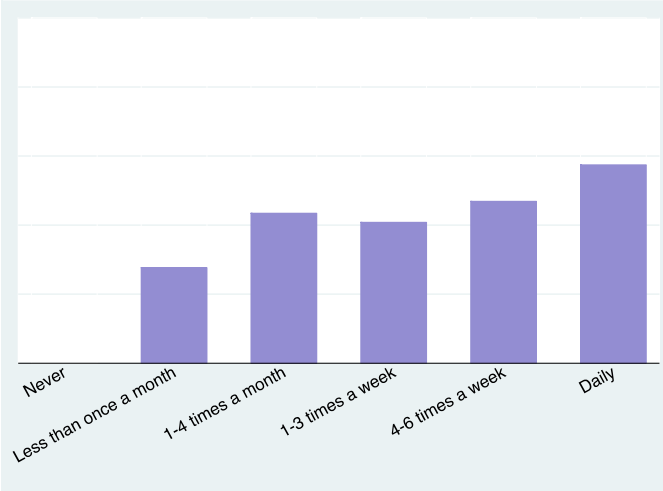


d. By visit frequency

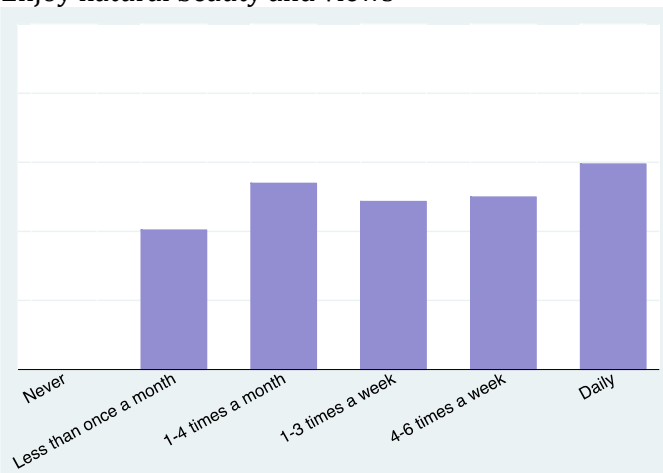
Be together with friends and family



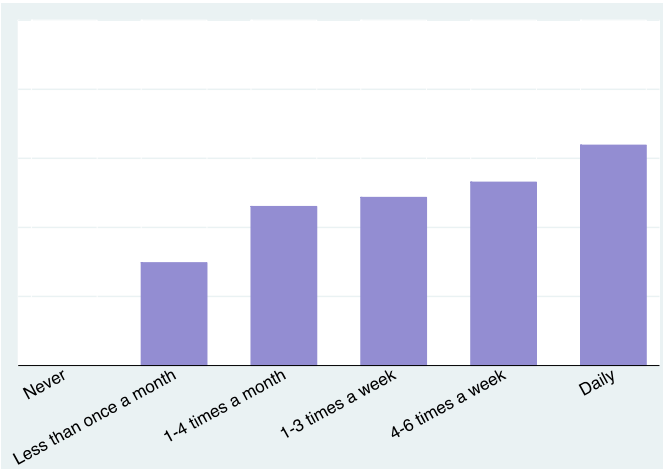
Feel connected to nature



Enjoy natural beauty and views

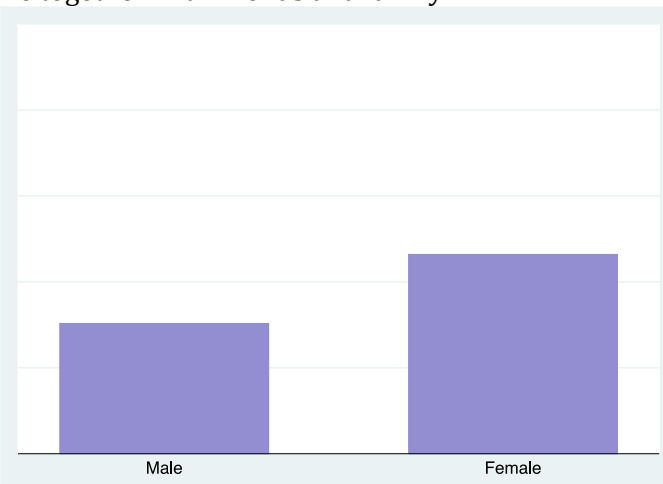


Hike or walk

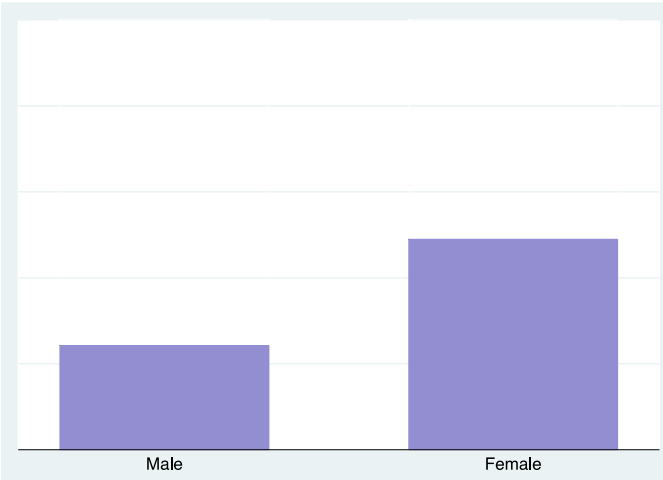


e. By gender

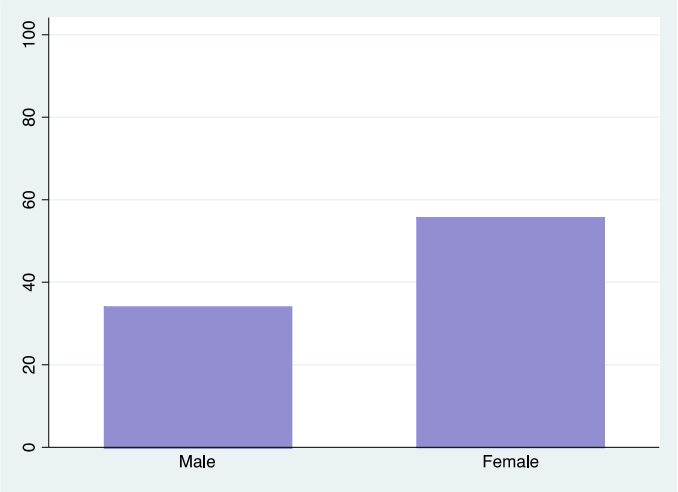
Be together with friends and family



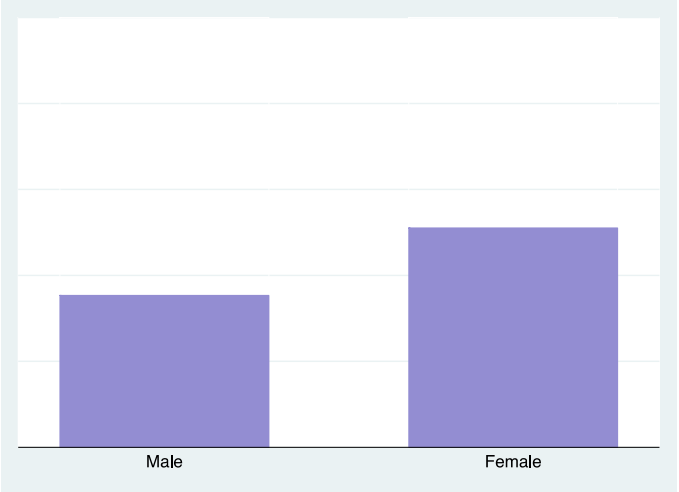
Feel connected to nature



Enjoy natural beauty and views

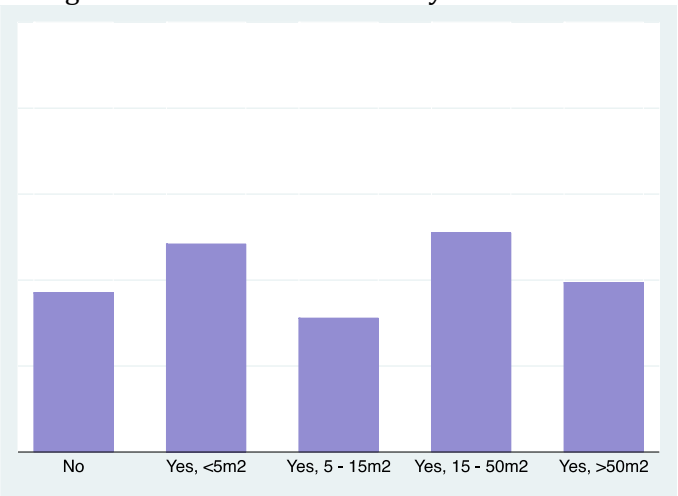


Hike or walk

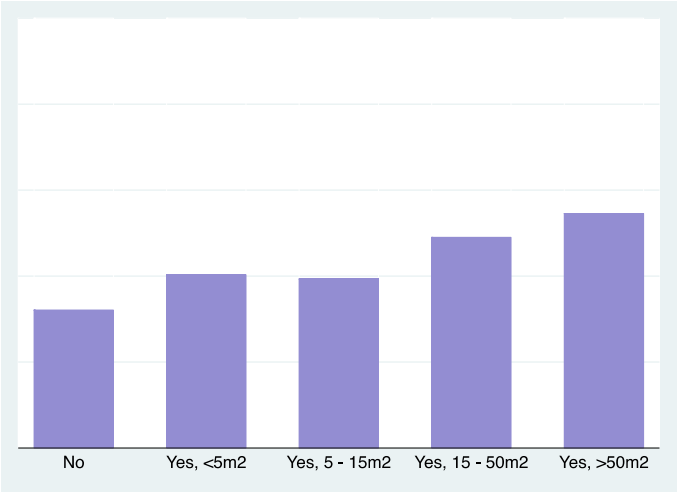


f. By size of garden

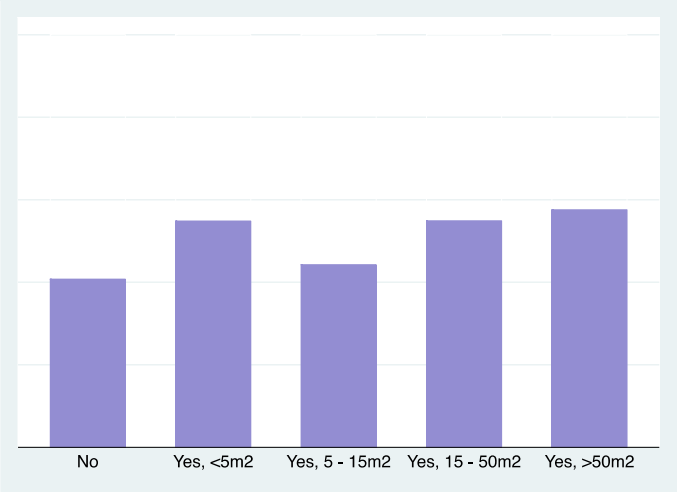
Be together with friends and family



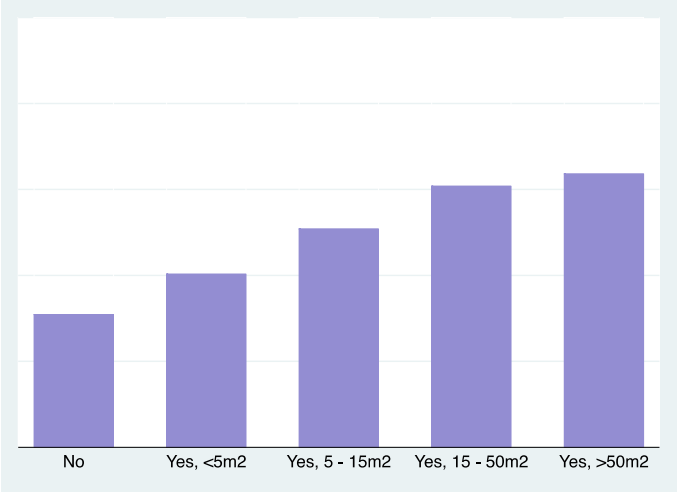
Feel connected to nature



Enjoy natural beauty and views



Hike or walk



Appendix 19: ANOVA-analysis for purposes of visit of the favourite and most frequently visited UGS

a. Race

		White	Choose no clas.	Black African	Coloured	Constant	N
(1)	Walk/hike	Base	-0.248* (-2.23)	-0.583*** (-5.49)	-0.458*** (-8.07)	0.774*** (18.54)	291
(2)	Enjoy natural beauty/views	Base	0.0503 (0.43)	-0.453*** (-4.07)	-0.291*** (-4.89)	0.739*** (16.88)	291
(3)	Enjoy natural beauty/views	Base	0.0503 (0.43)	-0.453*** (-4.07)	-0.291*** (-4.89)	0.739*** (16.88)	291
(4)	Be with friends/family	Base	0.0929 (0.78)	-0.353** (-3.10)	-0.253*** (-4.16)	0.591*** (13.21)	291
(5)	Feel connected to nature	Base	-0.0293 (-0.26)	-0.518*** (-4.82)	-0.404*** (-7.04)	0.661*** (15.66)	291

b. Religion

		Ath/agn/ no reli.	Christianity	Islam	Judaism	Spiritual	Constant	N
(1)	Walk/hike	Base	-0.284*** (-4.09)	-0.419*** (-3.40)	0.281 (0.81)	0.281 (1.26)	0.719*** (11.95)	284
(2)	Enjoy natural beauty/views	Base	-0.128 (-1.82)	-0.288* (-2.31)	-0.688 (-1.97)	0.312 (1.38)	0.688*** (11.30)	284
(3)	Get breath of fresh air	Base	-0.257*** (-3.70)	-0.441*** (-3.57)	-0.141 (-0.41)	0.159 (0.71)	0.688*** (11.30)	284
(4)	Be with friends/family	Base	-0.0857 (-1.19)	-0.181 (-1.41)	-0.031 (-0.09)	0.069 (0.30)	0.531*** (8.49)	284
(5)	Feel connected to nature	Base	-0.257*** (-3.70)	-0.441*** (-3.57)	-0.141 (-0.41)	0.159 (0.71)	0.641*** (10.63)	284

c. Garden

		No	<5m2	5 - 15m2	15 - 50m2	>50m2	Constant
(1)	Walk/hike	Base	0.0898 (1.09)	0.244** (2.95)	0.282** (3.23)	0.321** (3.18)	0.346*** (6.37)
(2)	Enjoy natural beauty/views	Base	0.135 (1.63)	0.0308 (0.37)	0.212* (2.41)	0.112 (1.11)	0.494*** (9.04)
(3)	Get breath of fresh air	Base	0.135 (1.63)	0.0308 (0.37)	0.212* (2.41)	0.112 (1.11)	0.494*** (9.04)
(4)	Be with friends/family	Base	0.133 (1.59)	0.0271 (0.32)	0.186* (2.09)	0.0415 (0.40)	0.383*** (6.93)
(5)	Feel connected to nature	Base	0.0538 (0.65)	0.0929 (1.12)	0.216* (2.46)	0.303** (3.00)	0.333*** (6.13)

d. Opportunity to visit as a child

		No	Yes, often	Yes, occasionally	Yes, but not at all often	Constant	N
(1)	Walk/hike	Base	0.148 (1.60)	0.127 (1.21)	0.111 (0.82)	0.389*** (4.66)	286
(2)	Enjoy natural beauty/views	Base	0.196* (2.17)	0.236* (2.31)	0.293* (2.20)	0.389*** (4.75)	286
(3)	Get breath of fresh air	Base	0.203* (2.22)	0.151 (1.45)	0.258 (1.91)	0.333*** (4.01)	286
(4)	Be with friends/family	Base	0.210* (2.30)	0.175 (1.70)	0.268* (1.99)	0.278*** (3.36)	286
(5)	Feel connected to nature	Base	0.247** (2.74)	0.200 (1.95)	0.414** (3.12)	0.222** (2.72)	286

e. Type of favourite UGS

		Com. Park	No UGS	Beach	District Park	Reserve	Sport Ground	Greenbelt	Constant	N
(1)	Walk/hike	Base	-0.591** (-2.81)	-0.135 (-1.13)	-0.199 (-1.69)	0.0720 (0.62)	-0.591 (-1.19)	-0.0909 (-0.34)	0.591***	265
(2)	Enjoy natural beauty/views	Base	-0.636** (-3.05)	-0.107 (-0.91)	-0.0553 (-0.47)	0.0603 (0.53)	-0.636 (-1.29)	0.114 (0.43)	0.636***	265
(3)	Get breath of fresh air	Base	-0.500** (-2.34)	-0.103 (-0.85)	-0.0946 (-0.79)	0.0393 (0.34)	-0.500 (-0.99)	0.250 (0.93)	0.500***	265
(4)	Be with friends/family	Base	-0.409 (-1.91)	-0.0120 (-0.10)	0.0639 (0.53)	0.175 (1.49)	-0.409 (-0.81)	0.0909 (0.34)	0.409***	265
(5)	Feel connected to nature	Base	-0.500* (-2.34)	-0.103 (-0.85)	-0.0946 (-0.79)	0.0393 (0.34)	-0.500 (-0.99)	0.250 (0.93)	0.500***	265

f. Gender

		Male	Female	Constant	N
(1)	Walk/hike	Base	0.117 (1.90)	0.424*** (8.47)	291
(2)	Enjoy natural beauty/views	Base	0.211*** (3.52)	0.434*** (8.89)	291
(3)	Get breath of fresh air	Base	0.122*** (1.98)	0.414*** (8.27)	291
(4)	Be with friends/family	Base	0.182** (2.99)	0.333*** (6.74)	291
(5)	Feel connected to nature	Base	0.197** (3.26)	0.303*** (6.17)	291

Appendix 20: Interview transcripts

Ivan Jones – Revelation Ministries, Community Pride
20 June, 2017

[Introduction]

N: Let me see. Eh, so could you please maybe tell again what you're exactly doing with the Community Pride project, and with the project with the children.
J: Yeah. So, what I do is that ehm with the children, it's a project called Rise Up. It has been birth due to children shot and killed. At one time four children. By stray bullets. So ehm. We the decided to bring the children into safe environment. So that children can be children, have fun, and play. And also be safe. And also due to ehm poverty in the community, we then provide a meal, a cooked meal, for the children as well. So, but we then also teach the children to rise up in the midst of their situation. And to have vision, to have goals. And we teach them basic things. That will be a plus for their future. That is the Rise Up project, we have around 150 – 200 children that attends this programme on a Thursday. And we have volunteers that come and serve at that programme as well. Very basic. It's children to come in and play in a safe environment. That is the foundation of the program. That is the children's program.

Then the Community Pride project, is.. we have so many open spaces in communities all over Western Cape. But particularly Lavender Hill, because that is where we work. What happens is people dump on these open spaces. So these open spaces is not anymore a beautiful place for children to come and walk and people to sit, but it becomes a dumping spot. Where people will bring their dirt, and they will dump it outside. And it becomes a big pile of rubble, and it becomes a place that is really not attractive. And it drops the standard of the community. And what I do, or what I've been instructed to do, is to clean the dumping spots. And to change the landscape, and do some planting, and do make some seating. And make the place look beautiful and raise the standard again. So that children can come and sit in the afternoon, because we also build benches for them to sit on, to read. With the idea that most of these children never go to parks.
N: Okay. So first a general question. What do you think that right now are the biggest issues concerning eh Cape Town's urban green spaces and the way people use them.
J: Are you asking about green spaces in terms of parks?
N: Any green space
J: Okay. I think green spaces in terms of parks, that is situated next to beautiful valleys et cetera, is being used by the government that people can go there and relax, have a braai, sit down, and that it's also maintained by the government. You know. So, they use it well. But there is so much more spaces that can be developed within communities. With a similar set-up. But they are not investing into that.
N: Okay. So you mean that in specific areas the government is like, focussing their attention on? Especially the wealthy areas? Whereas Lavender Hill is a bit ignored?
J: Exactly my point. Because when you go to, to Constantia or up the road, of Wynberg Park, it's looked after by the government. You will find there is nice trails to walk, it's beautiful, it's in the mountains, it's in the valleys, et cetera. But when you go to the Cape Flats, there is nothing like that. So there is, the well-off areas are being looked after. But the community areas is just being maintained in terms of their dirt bins. But nothing gets done.
N: So you think there is more government attention to also make those areas, in for example in Lavender Hill, ehm more, how do you say that, more attractive for people"? Do you think it would make sense? Do you think then the community would use them? That people would use them? And that it would be safe? Or do you think that the place would degrade? Ehm
J: Yes, I would agree with the fact that it would definitely raise the standard. Because.. But I also think that it's more the private sector. The private people to come in and to do those kind of projects. Because the government really don't know what to do. So that what you find with the project that I am doing, community pride, I've been clean.. I cleaned 9 dumping spots already. And I can then do on that dumping spot what I want to do, because the government just don't care. So I can take that ground and build whatever I want to build. To make it attractive, beautiful. And then shift the responsibility to the people of that area, to look after it. Ai, they need to maintain it, in terms of what they need, which is happening at the moment.
N: And that works well.
J: It works well. I mean, you've seen it. It works well. I mean, it's something that private people, the private sector needs to tap into, and uplift the areas you know. But other green spaces in Cape Town is being looked after by the government, maintained. And people go there and enjoy it.
N: Yea, I see. So one of the outcomes of my surveys is Figure 1. The medium number of urban green space visits per year, per neighbourhood. So it's very clear that people in LH for example, it's very low in compared to if you see Marina da Gama or Muizenberg or even Lakeside. Why do you think there's such a big difference between those areas in terms of how often they use UGS? Because they are very close to each other.
J: Yeah, it's also has to do with the apartheid setup. Because, with the Apartheid setup, and that is really the foundation of it. When the apartheid government removed people forcibly from areas like Constantia, Marina da Gama, Muizenberg, Cape Town, they've places them onto the areas like Lavender Hill, Mannenberg?, Rondevel?, with the idea, we just build you a couple of flats. That's it. There was no attention been given in terms of creating a valued

green spaces. There is just housing for you. But when people were still living in Constantia, they had the mountains. They had the natural sources. But in places like the Cape Flats, it's just a flat piece of land. So that's the difference. And for all the years now, no government has even, even the new government. They're thinking is not to develop green spaces within the communities.
N: But you're think it's important. Because there are many issues in such communities.
J: I think it's importan.t I think its important, very important. That's why I'm involved in this project. Very important, it really does raise the standard of how people see themselves, how people see the community. And also trees are important for us. You know. And for our living conditions. And you will find in Lavender Hill, there are no trees.
N. Yeah, true. So do you think for people in LH right now, it's an issue of availability of green spaces, or access to green spaces? So why they don't often go. Is it because there is just not enough green spaces in the area? Do they not want to go there? Do they not have the opportunity to go? Or do you think that people just don't see the benefits of going to green spaces?
J: You know the mind-set of how the people have been programmed in terms of the apartheid years, it has really kept them tunnel visioned for many many generations. In terms of not having a thinking pattern, or a view, of wanting to have green spaces. Because they just have been put there, you must work and you must travel from early morning outside, far, to go work and spend your whole day there. And you come home late, it's dark. So the apartheid years ahs set a program in place to never allow people to enjoy the green space. That is what it comes to. But we're in a different era now, different people, different generation. And we need to teach the new generation how important these things are. So that they can grow up. And, but also the fact that, you will see the houses when you go to uptown. To Constantia. Or even to Muizenberg. Big pieces of land. Trees. But in LH they're given a small piece of ground. Just a house on. Flats. There's no place for people to make a ..
N: So you think it's both. It's both people's mind-set and lack of
J: Mind-set and the condition, the apartheid years, placed the people in.
N: Okay. So, I found this quite interesting. This shows how often people visit UGS by if they had the opportunity to go as a child. So you see that people that didn't go outside as a child, you see that they also now don't visit UGS now too often. Which is, I think, it could be quite logical. But what's more interesting is that only in Lavender Hill and in Vrygrond, people said that right now, their children also don't have the opportunity to go outside. Ehm, how, do you think, how would this affect the children? That they don't have the opportunity to play outside?
J: Play outside? Or go ..
N: Actually, go into UGS.
J: Okay. Yeah, it does affect them in so many ways, Nina. Ehm, at first, it affects you to an extent to where you don't see the broader picture of life. Because of, you are just in that area. And you hardly get the opportunity to go out to spend a day or two day within a green space. If you go, you have to take a taxi or whatever and spend 2/3 hours there, and then you must go home. And not every family or child has the opportunity to do that regularly. But people that are more well-off, their children grow up in these spaces. It's not a, it's normal to them to live like that. So everything boils down to the apartheid years and what they did to the communities and to the people. and so when, it needs to be rectified. Either the government steps in, or private steps in, to say: listen. How can we create an opportunity for children to see this, and to go more frequently to places like this. And to become as normal to them. you can either take them there or bring it into the communities.
N: Ah, that's also actually one of my questions. What do you think?
J: I would say, we take it into the communities AND we take them out.
N: Both.
J: Hehe. Because if you bring it into the communities, which is why I started Community Pride, is, they see differently. So, so their understanding is differently about communities and about trees and about this. You know, children of community life, if they are not taught properly, they will break the trees. Because to them, it doesn't make sense they will trap on the flowers. Because, I mean they are: what is this? But if we get the opportunity to teach them, then they will get an understanding. So, bringing it in, and taking them out is important.
N: Eh, you just mentioned about how far people have to travel to get to UGS. That's actually what I also found. That people from LH travel much further for their favourite green space, then people for example in Muizenberg and Marina da Gama. Ehm do you think that people want to travel further to go to their favourite urban green space, or that they have to travel further?
J: I think that the want to is important to note, because it give them opportunity to go out. So they want to. I would say the want to is importan.t but also the idea if you go down to Marina da Gama, I don't know if you have been there. Into that Marina da Gama area?
N: Yeah, I've been there.
J: You will note that there is a, there is a river that runs he. A lake, there is beautiful green grass, there is trees. But believe you me, a lot of these children in LH, even Vrygrond, they've never been there. If they go there, they will say: wow is this really here? So they don't get exposed to this. They are being kept away.
N: By the walls that are around it? Or..
J: The walls, and also the fact that is has been set up so that they don't have to go there, because they don't have family that lives there. So they will grow up and maybe one day, within their years, maybe in a span of 60 years, they will go there and: man, wow, I never knew this beauty is here. It's set up like that.
N: I also looked at the racial differences. So what are the outcomes for all these things per ehm per population group. And I found out that it's a coloured people that travel furthest for their favourite urban green space. Do you think that's also something that's really rooted in ehm in the apartheid history. So for example, I heard a lady she said that people used to live really close to the mountain. And they try to get that connection back with the mountain. So they

would travel, because they are relocated, they have to travel very far to get there actually. Do you think.. Do you agree with that?
J: Yes. I agree with that. And the reason, because, well, people used to live, say for example on the beaches. In Cape Town. People used to live close to the beaches. But they were removed from it. So even when they want to go to the beaches, they have to take a taxi and the train. And they have to go to Cape Town to go to the mountain or green spaces, and they have to take a taxi and the train. And it costs finance. It costs. So, they would really travel and go there. Because they are connected. They came from there. But they were removed from it. It's a sad story actually, if you really go deep into the issue of green spaces and how the privileged has taken it for themselves and pushed one race of people away and say: you can't enjoy this. It is not for you. And that is why people travel now to go to farm places, to go to wherever they can. You know. I love farm places. I just came for Vista on Friday. And it's been, it's so beautiful. So we have always.. We grew up in places like this. My parents had a big plot. And they were chased off. And they built ehm a retirement village of millions and billions now. And nothing has been given to us. So it's an evil thing they did. And that's why South Africa is in the position that it is. Because the current government feel that the government of the apartheid has looked after one race. And they have advanced them with for another 200 years, in terms of being sorted out. And we will never catch up with them, because they always set the trend.
N: Yeah, because it's 20 years ago right now. But because it's so ingrained in the spatial layout, how can you change it?
J: We will never catch up with them. because they are trend setters for now. Because they have all the resources.
N: And do you think it was intentional like that, to sort it out for the centuries to come?
J: It was very intentional. It was, it was, to me when I think about it. And I'm not hatred against any of the government, but to think, you took away our privileges and gave it to one race of people. It was very evil. I mean. It's just pure evil. And they never reimbursed us. We had to just go through with our lives. And to .. Enjoy even this that we can enjoy now. You know. Sitting together in one room. You know, before we couldn't even drive in the same bus, same train, sit in the same seat, go to the beach. It's so evil. And I mean, that is still, when you look at green spaces Nina, you have to go down to the foundation of our children that we currently have. That is just the routine of just living there, coming to the mall. Some of them never come to the mall even. Because of the deep entrenched evil that was put there, to keep people in poverty. And to even eh eh put this onto their children as well. That's why we have to do something to uplift our children.
N: Do you also think that, because eh, for the children that are born now, Apartheid time is longer ago, so the times also that.. For example, your parents will vividly remember how it was before. How good life was.
J: I can also remember.
N: You can also remember. I'm not sure how old you are. But these children, they've never experienced anything else. This is their life. Do you think they are even further away from their connection with nature then the previous generation who actually lived through Apartheid.
J: Very much. They've been born into community life. So they, they are not connected to nature. They are not connected to the freedom. So going to the beach for them is a privilege. Ehm. But they are not connected. Because they haven't experiences what we have experienced. So, you know, that's
N: Sad reality. Ehm, let's see. Yeah. Ehm, one principle of sustainable urban development is eh higher densities. So that means basically preventing urban sprawl, but doing infill development. Development within current city borders. Ehm, so there's kind of a trade-off between having UGS and sustainable cities. Eh, how do you think that balance should be?
J: The balance should be both. The same. Especially where we come from. It needs to be the same. Actually more needs to be invested and more resources made available for community life. To bring them up to standard as well. Why can't we build a nice green setup within LH? I mean, there's a lot of companies that can do those things. Why not?
N: There's a lot of empty space as well.
J: There's so much empty space. Why not?
N: Still, what is interesting, it's this figure actually, the question was: do you think that UGS occupy spaces that would be more useful for houses and other buildings? And especially people in LH strongly agree with this. Much more than in other neighbourhoods.
J: Do they say, we need more housing there?
N: Yeah, they say, we don't need UGS, we should put houses.
J: That is the need of the people. But if you look at this, Marina da Gama. They have both.
N: So they're like, nah this is fine.
J: This is fine. We don't need more people close to us. Let us enjoy this. Here the need is for green space and for housing. So what will the people choose? They will choose housing. But here, the people are, no, no, no, keep people away from us. We've got a Vlei, we've got beautiful houses we've got trees, we've got green parks, we have trees, we can walk our dogs. So there's an imbalance within the set-up of South Africa. Big imbalance. I don't know about your country.
N: Ehm, there is an imbalance, but it's not as big as here in South Africa.
J: No, if you even go to Kayelitsha, have you been there?
N: No, I haven't been there.
J: If you go, two million people living there. And it's just hokkies. No green spaces. Just hokkies. Because people took the land. They had, they were forced to build a school, they were forced to build a clinic, they were forced to build a community hall. And that's all. No green space. No tree. Just hokkies and people.
N: Do you think that will change ever? It's hard to change, because you would have to remove people and that's also not ..

J: Those people are also imbedded within them to live like that. Even though they wanna come out to the city life. But that is their culture.
N: Ehm yeah, I had a list of questions about Apartheid but I think we covered them all. Ehm.. Yeah, let's see. Ehm. Yeah, I also asked people a question about what functions they find most important. I had a list of 25 functions, ehm, 5 of every category. And the categories were, economic, cultural, environmental, social and health and wellbeing. And people from all neighbourhoods found that environmental benefits of UGS were most important. Except for LH and Vrygrond. They find social aspect of green spaces more important.
J: For example, social?
N: Ehm I brought the survey with me. The social is spaces to be with friends and family, space to meet new people, space for children to play, space to learn about nature and environment, and the last one, I don't remember. I don't remember the last one. But those for in any case. So why do you think it's like that? That people focus more on the social aspects of UGS in Lavender Hill and Vrygrond, whereas in other areas people think more about the environmental benefits?
J: Because the people have been programmed to think more about social issues and problems because they are driven by their need. They are not used to having a big Vlei running in front of their house or a big park. So their focus won't be for that. Their focus will be, I need to go to work. I need to provide. And that is their routine. Whereas the more up class areas. They don't go work anymore. They set up their business, they relax at home. Their children benefit from it. So they can sit this morning on their balconies. And they can watch over the valley, they can see life in a different view. So they would say: ah, we need a walking area over there, we need another park there, we need some more trees there.
N: It's a mind-set again. Do you think it has also something to do with people in Lavender Hill not having their own garden? So if they want to be together with friends and family, it's either you are inside or you have to be outside in a public space.
J: It's not all the people in LH that got a little small place. But there is people that's got housing where they have obviously some seating in front, et cetera. But most of the people is, either you be in the house. But if they have a little space where they can set up benches and seating et cetera, or a braai, it will be different. But when there is space within LH, you will find there is a backyard dweller. So the child from the mother would get married and they will place them at the back of the yard. So all the space gets taken.
N: Ah, haven't thought about that yet. That's interesting.
J: So space gets taking. If you go into LH, you will find in the yard there is probably to or three hokkies. So there's no space for people to make garden. To come and sit even and to relax. And just look at the plants and say: wow, this is beauty. So peaceful, when there are bird that sit around. Where I live, I live in Strandfontein, very quiet area. We have a fountain with water. We've got birds coming there in the morning. So my view is also different from the people in LH. So all these things is been set up so that people don't enjoy. That's why they have to travel now to go and enjoy. Whereby people living there don't spend money to get there. They already live there.
N: Yep, and that even increases again inequality.
J: Inequality. Because my money gets taken away from me to see something that needs to be an open thing to see. But you living there, you stand up and it's normal to you. You don't spend a cent.
N: That's why people in Marina da Gama don't travel that much.
J: They don't travel. They do online shopping and never go out of their environment. Haha.
N: Ehm let me see. So what do you think can be done, so I told you about, this question, especially in LH that children don't have the opportunity to visit green spaces. What do you think should be done? The parents should be taught the benefits from sending their children out to play or do you think it's something more structural going wrong?
J: I don't think the parents don't want to send the children out to play. The environment has been so set up that you have even experienced the shooting there. But if there is a safe place for children to play, then the parents will even bring the children. For example, our project. Parents would send their children there to play there. Because they know it's safe. They know it's no violence. But then again all the other open spaces in LH becomes gang turfs whereby shooting happens. So it's not safe for the children to play there. Even though it's a big open space. It's not safe. So that would be, parents should be, let's say, they should have the confidence that that place is safe.
N: And then, do you think, you fenced the area where the children play. Do you think that would be a solution for other green spaces? Or do you then loose the idea of public space, when it's fenced?
J: That's a tricky one. Fencing is good. But it also looses the idea of public space. I think the children needs to be educated to understand that when they play. This is space where it's open and you know the area, and you always have to be aware of what is going on in your surroundings. But I don't think enfencing all the areas would be good, unless we have a big space and we do the greenery in that area, a thing that will represent something like Marina da Gama and enfence it and get someone to look after it and maintain it. You know? That would be good. And then that culture of making people aware of the green spaces and how life should be, can be trained and facilitated within that enfenced area. You know? So I could say, if we could build something like that, enfence it. People can come there, can be trained, can be taught, can be equipped. And it can become normal to them on a regular, daily basis. That would be good. So when they go out, they are, it's not new to them.
N: Yeah, maybe something like the biodiversity garden in Green Point for example. Where people can relax, but also learn about nature. That one is fenced as well.
J: Yeah, so why not build something like that in here?
N: Yeah. Because this is probably an area where it's needed most. And not in the privileged area in Green Point.

J: Yeah, it's needed on this side. But the thing is, how will we get these things there? When we're dead? You know. But once again, like I always say, if finance is being placed in that areas, it can be done. And I don't see why the government want to do that.
N: Yeah. I've spoken to some ladies from the NWF and they said that if the government puts money in increasing the quality of urban green spaces in LH, that at first it will be a good space, but they say when time evolves the space will degrade. Because, like you said, the children don't understand the value of it, and it will be destroyed.
J: That is the mentality of the people of the NWF because they have experienced that all the time. I choose not to believe like that. I choose not to see things like that. I choose to believe and see things, if we have a 10 year to 15-year plan in terms of building and maintenance, and educating and equipping the children, and creating that space for them, I believe that some of that children will develop a love and a passion, and they will then maintain and sustain that areas and take it to their homes. You know? Because we will reproduce plants, we will do this, you know. So, if planning is done properly and there is enough finance been allocated for it, why not? And we have a long term plan for it, what should go wrong? Nothing should go wrong. You know. There is ways and methods of .. But the thing is, why they think like that is because they don't want to create work as well for people. So if you have a setup like that, I mean in Constantia, they have security. Why not do that? They do security 24 hours, day and night. Because you have a 15-year plan, there is finance available for it. Nothing should stop you from doing it and making it a big success.
N: And then the money for that should come either from the government or from the private sector?
J: Government or private sector. But you can also then sustain it within that 15 years to reproduce and to plant and to provide for ehm what you call these places that sell plants and such et cetera. What's the name for it, where they sell compost and .. It's on my tongue, I can't get it.
N: Yeah, I don't know the English word for it.
J: But I mean, you can then reproduce and you can sell it. And those funds can sustain things that needs to be sustains. There are so many ways to make it a success. I believe that. I can't be negative. There's so many ways to make it. But it just needs someone with that heart and that's not in it for the money.
N: Like you.
J: No, I'm not in it for the money, money comes from ..
N: No that's what I meant. Someone like you
J: I mean, I spend my money, and I don't live in that community. I spend my personal money on projects in that community. And I would run dry, but then suddenly let me know, we're giving you so, we're giving you a little bit of money. So I've experienced that. But it mustn't' be someone that's moved by money. Someone that want to have impact and influence within the next 15/20 years for the next generation. And raise up people that can have the same mind-set. We have to start with the young ones now. The older ones are not in it. But I believe there's a lot elderly people now, probably 40/50 years old, that really wants to, because they come from places like Cape Town, the sea, the mountain, that wants to be part of projects like planting and green spaces. But also the rush of life. Social needs drive them not to spend time into those type of things. It's crazy, hey?
N: Yeah. Whereas also I think ehm planting your own vegetables and fruits, growing your own vegetables and fruits, could also give economic benefits.
J: Have you seen my gardens? They're there. The little gardens.
N: Yeah, yeah, I've seen them.
J: I have never planted in my life.
N: And they're growing right?
J: Yeah, when I started we had harvest of everything. So, but I went for a couple of workshops to learn about the soil et cetera and what to plant where. But I mean, these things can be put in place to teach the people. And the city of cape town, or at least the government, they do have, they do have set funds available to, because they see the problem that the apartheid government has created and now they want to help the people. But they're not helping enough.
N: So what projects are you talking about specifically?
J: They do have a gardening project, Poverty eh, they call it Poverty ehh .. Where they want to eliminate poverty. So they put money into veggie gardens. get people to work in them, but also learn to plant and to live from it. But they don't put a lot of money in it. They put like within one area for three months. You cannot do something like that. But they also have to see to the whole Western Cape. So, I would say, you have to look at long-term, give someone the opportunity for five years. To work in that garden. Learn. Plant. Sell.
N: Show others how to do it.
J: I've set it up. I don't have the time to do it. But uh uh a lot of people show interest also. Because of their social needs. They have to do things to have their need provided.
N: And that takes up a lot of time.
J: whereby people in the more wealthy areas, they don't have to worry about food. They don't have to worry about money. They don't have to worry about children. Because all those things are sorted out. They can spend 3,4,5 hours in their garden. Just sitting and cleaning and investing in it, you know. Going down to the nursery, that's the proper word. To buy the soil. To buy the seeds.
N: I think these were actually all my questions.
J: Serious.
N: Maybe.
J: Oh wow.
N: Let me see. Well, I actually have a lot of questions, but we already
J: We talked about it
N: Yeah in our conversation.

J: You can just fill them in.
N: Let's see. Yeah, it's a lot about education and about children. But we already put it al ..
J: You know Nina. I'm the type of guy like this. You've seen the condition of LH and I know your purpose is to do research, take it back, and then put it all into one, into context. Em. My heart is always where I want people to not just see what we do and what we try to do. Because what we do is totally without resources' y thinking is always that, when you go away, when you go back to your home and you, you know, you put in context, and you do .. Is to always think of the communities you have engaged with. And try to, how can I set up that green space? How can I influence, you know. That's always my last comment I would mention to people. Is to, you know, there's so much needed. The balance is like this. So one out of ten, you will find in the next generation, will get the opportunity to really enjoy what the rich have. But it's supposed to be free for all.
N: So how .. You know, that's the problem with research you know. What I'm doing, I'm kind of generating knowledge and that's it. It just ends up in ehh a document eh I'll make a short video to explain shortly in 5 minutes to the people that helped me what the findings are. And then? And then what?
J: I know. That's how it works hey? The research story. That's how it works.
N: Yeah, which sucks. That's why I'm not going to do any more research after this. I wanna do actual stuff, like make an actual impact. I don't know, it could make an actual impact. It's also what the City will do with the knowledge that is generated.
J: Are you giving this to the City as well?
N: Yeah, that's the main eh..
J: You know, I've been dealing with the City for 20 years now. The City is so set in their ways that they, they've got so much to do, but they focus on things that is just, in terms of community life .. The City just focus on things in terms of throwing the money to the people by creating work, but not really focussing on the social, eh sorry, not focussing on the green spaces. Yeah, so they would create work, but the people will be in the same position as the work only lasts for three months instead of a year. And the conditions stays the same. So my research, and what I would love for you to add is, why don't you have a look at what Ivan is doing and how successful it can be. Why don't you throw resources and funds into that?
N: Yeah.
J: Eh because they do have people that clean the area. Why don't set one of those people for five years, give him a contract, let him maintain that specific area that was clean and make it into a green space, you know. Get security in the night time. because in the day time the community will take charge of it. But in the night time you can have security. So that's the way I would say to them. look at this. How can we throw some finance in this. You do need a lot, but they way I work you don't need a lot.
N: Yeah. I see. So ehm, what was I going to say. Yeah that's also one thing, I think that the City, they think in a certain way, and I don't think that a lot of their project is like, built on research. It's not the foundation of what they're doing. And I think that's wrong. Because when you do research you understand the situation. You know what's going wrong and what is going right in certain communities. And you can have that ..
J: But they don't wanna hear from Apartheid. They know the imbalance is there. They don't want to hear about it.
N: Yeah, you think so?
J: Ja, I would say that they don't want to hear about it. They know the imbalance. But the thing is, the imbalance needs to be maintained. That's why they would invest more money on that side. Because the rates paying is higher. But the imbalance, they know about everything. They don't want to. They just do their normal thing. And it's sad.
N: And it's kind of ignorant. I think investing more money in those communities that already have really good UGS has much less impact then if you would invest that same amount of money in for example LH. It could make a huge difference there. For example, in LH it could make a huge difference there. Whereas in Marina da Gama and Muizenberg, it's already that good. Extra funds will not make a difference that much.
J: You know what the environment does to a human being? It create calmness. It creates a sense of: wow this is beautiful. If we understand it. And that is been kept away from them. I was looking at the mountain plants that I've planted at the centre, and also outside and how beautiful that things are growing. But believe you me, a lot of those children, they will not value those things. Because they are not used to it. We need to train them. train them not just for an hour. But train them everyday. To understand the ground, to understand the green spaces and value it.
N: Do they not get something in their schools like that? Learning about environment?
J: Maybe they do get. Yes, they do get Environment. But it's just literature. Not the actual thing.
N: Not that they actually go there and see it and feel it and smell it.
J: No.
N: Have you heard about Birdathon?
J: No.
N: -Introduce the Birdathon project-
J: Everything is never good enough in terms of wanting to make a difference. And impact and influence. I think the policies of the City needs to change. And it needs to change by research. This is what we currently have in Muizenberg, Da Gama. And this is what we have in LH. Why? What can we do to bring that into LH? How can we sustain it for five years? Ten, fifteen years. Don't talk five years. Talk 20 years. How can we sustain it for 20 years?
N: So is that the policy thing that should change? They should focus on learning about what's going well in other areas and focus on research?
J: Definitely.
N: And is there other things you should the City should change in their policy?

J: I think that is the first thing. Because the life within Constantia or Marina da Gama is different from the life in LH. Because of the environment, because of the people's social needs are met already by their way of life. So that policy should change. They should bring what's in Constantia down to community life. One policy. And not just create work for people, but create opportunity for people to the work and also to implement those lifestyles down into LH and other communities. So their policy should really change. And research properly. They don't research. They've been doing this years after years after years and it's not working. And they're just throwing money. Like within the gardens, this project that I have. They give the people contract for three months. To me it's just like, they're just throwing money, they're creating work but they don't really invest in .. Because the idea is to eliminate poverty and to have your own veggie gardens. But they don't really invest to sustain that veggie garden. Because growing things take time. you can't give someone a opportunity for three months and expect that person must continue his life by growing things. You have to make it a year, two years. Because growing things take seasons. So there also the policies should change. Longer periods. So that that person can start planting at home, in tiers, wherever there is a space. Create a tree. Create an open space. Even within the mall you will find there is plants. But go to the shops in LH. You don't see a plant. The life is busy. People are driven by their needs. And not by ehm enjoying a good environment. They can't enjoy a good environment. It's sad.
N: Do you also think that maybe people in LH don't have very strong voice against the government? So that even if they really want to have their undeveloped green spaces developed, they don't know how to get the government to do that for them.
J: They don't know how. They don't know how. To be honest, they don't know how. To be honest, they may be not interested in it. Because the government has led them down all the time.
N: So they don't have any confidence in any change.
J: No. So sad. But I'm glad that I'm busy with something that you're researching about. Cleaning dumping spots and changing the landscape. So much so that the people respect me so much so more. Of what we are doing. And maintaining those areas. Fantastic. And it's easy man. It's not hard, it's not difficult. Just give me the money and see what more I will do.
N: Yeah.
J: I don't say to you, just saying in general. What more can I do with the money. Wow.
N: And if people have respect for what you are doing, they are also likely to respect the green space itself.
J: You know what. Those dumping spots that I've cleaned, those was dumping spots for years and years and years. Everyone complained about them. but every since I've cleaned them and maintained them, no one is dumping on that spot. The mind-set of the people has been changed. Don't dump there. This is a nice green space. It's easy. So easy. And it took only a couple of months. Obviously with the help of God. But the mind-set of the people has been changed.
N: Is that a bit maybe because you are seen in the community as a role model? And if you eh respect that place, they are likely also to respect that place?
J: Not so much that. It's just the fact that the mind-set has been challenged. Do I go throw my dirt here? Or do I go throw it in the dirt bin? Look how nice and clean and neat it is. So the mind-set has been changed. Not so much me being respected. But the mind-set. And we can change the mind-set. It just needs to be resourced well. And it needs commitment and everyday presence of people working there and keeping it clean. The mind-set. It's all about the mind-set. Because people walk past that area everyday. And they see: wow, even if someone is picking up a paper, someone is planting a new tree, someone is planting this. Someone is creating an environment that is for nature to create a peaceful atmosphere.
N: Are people proud of it? That they see that happening in their community?
J: Very proud. People want to do that to be honest. Last week I got some guys on another area that I started, to clean and to paint. And I mean, these guys were so proud about that. I need to maintain those things. Go back there. Supply them paint. See that it's clean. Supply them with bags. But they already have some trees they planted and it's growing. And the children come to play there in the afternoon. It's huge problems in terms of the layout of apartheid. But it can be changed and it can be challenged as well. It just needs someone that has the driving force. And that has a passion and wants to do it. And also the resources. Can happen very fast, very speedily. And it can be maintained. Because you train up the people of that area to maintain it. That's what I've been doing. I raise up someone in all the areas to look after. So now when I go back, I say: Listen.
N: Is it more people from 40/50 years old that you've trained? People that experienced life before?
J: Yeah, mostly. But also the younger ones, I do train as well.
N: But maybe not people of my age?
J: How old are you?
N: 24.
J: Nah, we do. Because they come and look for a job. So the job drives them. but it gives me the opportunity to teach them as well.
N: Do you not think that the mind-set of the people of my age are already a bit ruined? Because they are now too old to grow up with green spaces, but they are also too young to know how it has been before?
J: Yes, that's exactly the point. You know, I wanted to show you the impact or the influence of ehm the project that I've started. That some of the youngsters that would stand on one corner always. There was an open space next to the flat and there was really no place for them to sit when they're outside. Because most of the time the children .. the youngsers are standing on the corners. There is not yard for them. so they have developed a little piece and put down seating, so they can sit down there, they can plant something there. So already they want to. They want to get involved. They want to. They are very eh, they can use whatever is in front of them to make things happen. So they're your age. They want to get involved. They see the need. But they need help to do it. But some of them will just do it if

they have the things. It works. It will work. It's very positive. And it's very powerful when you see it happens. I mean, I started this project in November last year. And from what I've seen so far. It's crazy. But it costs a lot of you that is driving it.
N: What actually made you start this project?
J: Okay let me tell you, but it's quite a story. I was instructed. I said to god .. Firstly, I am a pastor hay, you know that. So my drive is always the spiritual side of humans, but also, when you work in a community like LH, you also have to supply the natural side of people. What I said to the lord way back is, I want to buy this community. In terms of the people, and whatever. And he kept quiet and some months after he said, this is how you buy this community. You clean the dumping spots. Because dirty places is being controlled by Satan himself. Because Beelzebub, the original meaning that is, Beelzebub means lord of the flies or lord of dung. And you know what draws flies. Dirt. And you know what dung is. Poo. So what happens, in our communities all over the Western Cape, we find that there is so many dumping spots and dirt, that it becomes a principality for evil. It just takes control of the atmosphere and it creates that whereby we experience that people just shoot like crazy. So what, when I was instructed to do this, and this is how it works. When I cleaned the dumping spots. Let me give it to you like this. The enemy is a falling angels. He was an angel, but because wanted to be higher than God, he was then cast out of heaven. So wherever he operates, he drops the standard. When you go to Marina da Gama, you will see a standard of the green spaces, the housing, the people are high. There is two ways of raising the standard. One is finance. And the other one is when the spirit of the Lord comes in and he raise the standards. So what God told me is that, I want you to clean the dumping spots and raise the standard. So that's what I've been doing. And it was, I never did it in my whole life. It was all new to me. But it is purely to save God the community and the people by raising the standard in the spiritual, but you can also see it in the natural. So that is what I'm doing, is raising the standard. We say no. We don't have space for Lord of the flies or lord of dung in this community. We making this space beautiful. We are making green spaces here. We planting. Because we are raising the standard. And automatically, because god is a spirit, we are then working in the unseen and we drive out demonic forces and evil. And that is why I started the project. And that is the idea behind it. Raising the standard. Because I understand that the enemy drops the standard. And so we are saying, we raise the standard. By cleaning by what you think you've dropped. And so we take back the community.
N: And you see that evil actually vanishing?
J: It subsides. Big time. so much that never in the history of LH, whenever there was gang wars, within one day when the gang war rises up, the gang bosses would come together and would agree to peace and the shootings would stop. But this one that has been fought now, and it has been quite a couple of weeks, because I believe that the enemy wants to show and wants to try, you clean this place, it doesn't work. But I don't believe that. I just continue and raise the standard. And we experienced that in history, every time now gang bosses is making peace. And they tell their soldiers no shooting, no fighting et cetera. So that is the plus for this whole thing and for the community. Because it is not good to live in a community like that. You will never be able to make it. Shooting whole day, every day. You know? And the police don't have any answers to that. It's, these problems is all, it's all going down deep into the roots of things. And when we deal with the roots, we can change. But I would love more green spaces in LH. I would love a fountain running there and a space that isn't closed. Trees. Birds. I would love those things. The children would love it. Just to come sit there in a space like this. And there is grounds like this, where children can sit and listen to the sounds of running water and birds and nature.
N: I hope so, in the short future.
J: That's why you are doing research. Even not, we continue to do what we do. But with new ideas, we try to build something like this. Good new ideas.

[Wrap-up]

Anthony Roberts - CTEET
20 June, 2017

[Introduction, explaining research aim and aim of the interview, and explaining terminology]
N: Could you explain once more what you do? I know of course, but for the sake of the research.
A: What I do or what the organization does?
N: Well, both. Probably more what CTEET does.
A: Well, it has three areas of focus. One is environmental education for children. So working predominantly with low to low-middle income groups. And trying to create contact points for those children with nature. To understand, that's nature. And understand it. I think .. You're not going to protect it if you don't understand it. So it's working with children. It's a variety of things we do, from education camps to eh interactions within the school property to more one-on-one programs as well. With small groups of children. Where they really, their perception and their, their association with the natural environment would really increase. So that's environmental education. And the second sphere is training and development. And there we work with youth. So between the age of say 18 and 30. And we try and ehm well, we do create learning opportunities for them to come onto eh urban green space. Nature reserves predominantly and work on or be assigned to various development programs. And those are generally a year-long really intense development programs, where they get work experience and training. And where they will walk away from that hopefully into the green economy. Presently we have about 80 people involved in that.
N: That's a lot.
A: And in parts it's also university graduates. We have an internship program as well. Trying to have eh, or create these opportunities for individuals who have got the academic background, but not really the work experience. And that's country-wide. People come down to Cape Town to join this program. So that\s our training and development. And then the third sphere is actual on-the-ground conservation activities ehm, where we place people on conservation projects. It might be managing a sight, it might be actual species management, formal managemen.t and there we got about, yeah, 50 people placed on about 10 projects across Cape Town as well. So it's city-wide. Ehm, we work in partnership with the City of Cape Town. And that's critical in terms of local government and public-private partnerships and how that can work. And in fact what we do and achieve wouldn't be possible without that partnership. Not that there's much funding coming from the city, it's more, it's the place to actually ehm run these programs. And the partnership comes in through mentorship from City reserve managers. So it's a fantastic model I think. Eh for international, you know. Not just locally, but internationally. It's a good example of what can be done in that sphere. So I think that's in a nutshell. Quite broad. But we have a crèche-to-career model. So trying to identify from little kids and then create contact points and opportunities and foundation through their whole development process, to eventually enter the green economy in the market space.
N: Okay, and this partnership with the City, is that instead of not really financial, it's more accommodating what you guys wanna do or?
A: Yeah. It is, of course there are financial benefits to us as an organization, because we don't have to provide the land and a lot of the mentorship and the management of staff on various project is done through City structures. So there's a huge benefit of the partnership as well.
N: Okay. Ehm, yeah that's all clear. Ehm so my first question is eh a very general question. What do you think that currently are the biggest issues in Cape Town in terms of urban green space attitudes of mainly eh young people in this case?
A: The issues around ehm .. their attitudes. I think ehm, and this is across all economic groups?
N: Well, you probably know best what peoples UGS attitudes are in the lower income regions. So if you ..
A: I think ehm there is a, there is a big problem from low income groups. In part it's accessibility. I mean, you're talking attitudes. But attitudes comes with exposure. And to me the problem is, is that in many instances the parents don't have the time or the finances, or necessarily the interest, to take their children to green open space. And when I'm talking GOS, I'm talking more nature reserve. So that's one problem. And I think that has a serious effect on how a child .. If you're not taking to that space as a child, you're .. the likelihood of you growing up appreciating that space and passing the message onto your children is vastly reduced. So, I think the attitude around it is, is impacted. From the more privileged communities I think there's obviously technology impacts on them. And that's an international problem. Children sit behind the screen and don't go walk on the mountain. But I think we're really progressing here in Cape Town, that those people who can travel do. And whether that is from your suburb to the mountain, or from your suburb to the coast or whatever it is. So I think you're already getting along financial economic lines, you're getting why there are serious differences. And you're getting kids that are exposed to these different opportunities from a eh more privileged background. It differs, Cape Town differs very much to other big cities in South Africa. Joburg for example, you don't have GOS on your doorstep. But on you doorstep is all relative as well. If you have to get a taxi to go down to the beach or to your local nature reserve and it's gonna cost, you 10R each time and you have to pay a few R to enter. It all adds up. And when your parents are unemployed .. And of course there 's a lot of other socio-economic chances. So I don't know if it stresses enough the main issues .. I believe the main issues on children's' attitudes is a lack of exposure. So that's a long way of really saying a lack of exposure. Ehm and ehm I think more, the children that I expose have a greater appreciation to those that are not exposed as much.
N: And do you think it's mainly an issue of, for those children, of availability of UGS eh close to their house, within their reach. Or is it more accessibility, or both?
R: Availability or accessibility. Just coming back to what is UGS, because, you know, what one considers UGS according to your survey, you know, could be anything from a local park to a soccer field to a nature reserve. Ehm I think with the densification in Cape Town, I think there has been a obviously poor town planning, in the sense that

you've had this informal settlement, just this massive boom and a need to try and address a lack of GUS. Where every square meter of land could, you know, house or be part of a house block. So I think GUS has been impacted on terribly there. So in terms of availability there has been impacted on in the low communities that still have nature reserves within walking distance, many of them. but ehm, and the City has tried to do parks. I think what the City is trying to do now is address the thing .. The ship has already sailed and now they try to recover and say, okay, we need to create GOS. And then that's obviously not natural. Not nature reserves. So accessibility and availability .. Yeah, availability in the low income is an issue. Accessibility I don't think is .. I don't think it's as big an issue as one might think. I think because of the distribution of nature reserves across the city, they're fairly accessible across the city. But of course if you have to get transport and drive to the place and your parents don't have the transport and they don't have the time or interest to take you, then accessibility becomes more than a cost of entrances, it becomes a cost of getting there.
N: Okay. And then in that case, would it maybe also be that t hey don't understand the benefits of going to UGS? So that it's not a matter of either accessibility nor availability, but just not wanting to go?
A: Yeah. I think ehm eh lack of interest does play a role, definitely. Yet, having said that, when we run our camps and you bring children into that space, and I've seen it from privileged high end sort of economic ehm levels to really low end. Children are just really eh warm to green. I mean, it's amazing how quickly, and it's across the board. Surely you get the odd one that doesn't. But most children just love GOS, they're much closer to their natural roots than the rest of us.
N: Yeah, you think that especially children have that?
A: Definitely. And I think, you know that's key to why environmental educations needs to carry on worldwide, is that they .. In those formative years, if you can create that impression and that understanding and that appreciation, then that's already established. What they do with it later on is another story, but at least you've created that foundation so they see.
N: Yeah. So you just mentioned that ehm bad eh urban planning is one of the main causes of certain people not having ehm, not being exposed to UGSs. Do you think that's something that is rooted in Apartheid history? Or can you not really link those two things?
A: Yeah, I think .. It's ehm to an extent does. Definitely. For lower income communities eh the realities in Cape Town ehm Khayelitsha didn't really exist ehm in the early 80s. It was a tiny little settlement. And in a short space of time, in a decade it just ballooned. With massive influx of people ehm into Cape Town. And as an example, and I think the city was sort of reading, you know trying to accommodate ehm this influx of people, and still to this day are still trying to do that. I think one of the, the poor urban planning ehm, the biggest problem I believe we have in CT is that we, we sprawl rather than go up.
N: Yeah.
A: Ehm, if we eh clever urban planning would say well, okay, go upwards. And then create these opportunities for green open space down on the ground in between your high rises. And ehm, and ehm so I think that's being, yeah, poor urban planning. And then in terms of our life blood, water, the rivers, the planning around rivers ehm, rivers were being seen as just a means of getting water away from the urban environment, rather than actually nourishing those as green lands. And, and now what you're trying to do, you're trying to pick up the pieces of a broken past in terms of planning, urban planning, and reconstruct those and readdress those challenges. So I think, yeah, urban planning was definitely in some cases eh poorly done. Particularly in the low-income areas. Ehm yeah. For sure.
N: Okay.
A: But to address, is it a result of Apartheid. Yes, in part. Yes. But also because of just this mass urban migration as well. It's trying to estab.. well, how do we deal with this and get, and get res .. ehm infrastructure in, in place, to address that. But at the same time plan around it. I don't think the city ever managed to keep up with it. Ehm yeah.
N: Yeah, because n Khayetlitsha there is not really any ehm public open green space right?
A: Yeah, very limited.
N: The thing about urban sprawl that you mentioned, I actually asked ehm a question about that. One of the negative aspect eh of urban green space. I asked people if they think that UGS occupies land that would be more useful for housing and for buildings. Ehm, I actually brought the figure with me [show figure]. So you see, it's this one. You see that ehm, so five is the people that strongly agree, and zero is people that strongly disagree. And especially in LH people agree with that quite a bit. Whereas in Maringa da Gama people, and in Lake Side, people strongly disagree with that. Why do you think there is such a big difference between the mind sets of people in LH versus MdG?
A: Well, MdG is upper income, and they've got a piece of land around them eh being their own property, and they've got access to water and if they wanted to get a canoe and canoe around. They have all the opportunity in the world to appreciate that urban eh that urban green space. Problem with LH is ehm really highly densified ehm settlement. And ehm and again as a, as a ?? because those individuals living in those communities weren't given the necessary that opportunity to develop an appreciation for ehm green space. That ehm, well, if you've got a piece of land, rather build houses instead of having ehm people .. How, well, without houses. And that's what it comes down to. It's total dissociation with the natural environment and ecological processes and ehm, yeah, resilience and all the rest. There's just no link. Total dissociation. We need land, too many people living in a small space, ehm and of course ehm poverty place a major role in that. Poverty is, well, the government needs to build a house for my kid. I need them to build it close to me rather than, you know, miles away. There's a piece of open land, rather build houses there, so I can be close to my family. And that's just a reality, is that ehm yeah, I think poverty plays a major role in that perception. So, MdG, high income. Or mid-to-high-income. LH low, very low income.
N: Okay, yeah. Ehm, I had eh also, asked them a question about the opportunity ehm of eh children to go outside. And it was also especially that, I think it was only in Vrygrond and LH that there were actually people that their children

never had the opportunity to visit UGS. So that's again you think the poverty eh that causes that. Or is it maybe also to do with ehm safety issues? I can imagine that some people in LH don't let their children play outside, because of gangsterism and stray bullets and all that.
A: Yeah, I think it's .. So the two ehmm safety and accessibility would you say? What were the two option? One is a safety thing?
N: Yeah, and the other would be maybe accessibility but also like you said total dissociation that maybe the parents don't see the need for their children to ehm go outside into green spaces.
A: Sure. So the other thing is also are parents really understanding what's happening with their kids? Because the kids, with their schools, might go to GOS. So for example, we work with a lot of schools in the LH area, and the kids come on camps or outings with us, so is it that the parents are forgetting that? Like: oh yeah, I remember. My kid went on that camp to a GOS, or they're saying just on your average day or average week or average month does the kid have an opportunity to access GOS. And I think they're two different things. Ehm. So my, my suspicion is that it's, it's eh the latter. Is that ehm it's more around eh that on a day to day or week to week basis they don't have a place closely where they take their kids. Ehm. Which is, is, is untrue. 'Cause there's Zandvlei, there's Rondevlei, you know. There's quite a lot around.
N: Yeah, which is really close by.
A: Yeah. So then it's a safety thing, you know. And I know for, for certain that ehm that children generally finish school, come home, and the parents would prefer that they're inside than outside.
N: Yeah. So also with this safety issue. Do you think ehm, so I think, yeah, LH ehm I think I have a figure. Yeah, so this is how often people from various neighbourhoods ehm visit UGS per year. And yeah, naturally it's really high in MdG. People go almost daily. Like, over 200 times per year. Whereas in LH they go very little.
A: Yes.
N: So, do you think an issue like this should be resolved by ehm getting the green spaces, more accessible green spaces, into LH, or getting the people that live in LH to other green spaces? I'm not sure if my question is clear.
A: No, it's perfectly clear. The reality is eh, and you'll see through you questionnaire that ehm people's perception of, of green space, is that it's potentially an area of crime and, and the issues that are associated with it. And I think until such time that you can deal with that crime, then it would make sense to, to, to take people from the areas ehm, take them out of that and put them in eh, in another safe GOS. So there's, there's not a negative association with that area. But then it's a very false, you know, suggestion, is that ehm, so if you had a GOS on your doorstep, there's a chance of getting shot. Or if you have a GOS 5km's away, but you rely on someone else taking you there or getting you there. You know, what's preferable? Ehm, I think until you address the crime issue ehm then eh, it would make sense to give people the opportunity away from their environment. But the ideal situation? Ehm would be for every community to have just around the corner a park or a natural area or fields where they could play. That would be the ideal. In a ideal world. But, you know, crime is, is the main, I wouldn't be surprised if crime came up as one of the main issues.
N: Yeah, that's also interesting. I think I brought that figure as well. Actually people, there's not really a difference between neighbourhoods how they see eh crime. So this is eh, the question was, do you think that UGS induce criminality and vandalism. And eh actually, this one I can cross off because there were very little respondents here, so that is not really representative. But it's quite eh equal how people respond to that. Whereas you would expected maybe people in LH to more strongly agree that people in Muizenberg or Lakeside or MdG.
A: My suggestion there would be to, to someone that lives in LH, if you got a gangster outside your door, or if you got a gangster in the park, it's .. It's, I agree. You know? The crime is there. Regardless. Ehm, whereas ehm someone from MdG who is aware of the news and you know that there's a chance that if you're walking in the mountain that you might get held up and robbed or something. So I think the LH, I think the views are different. Out there, there's crime and there's a chance of getting shot. Whereas you know, MdG might be slightly different perception.
N: Yeah, I see. Concerning this safety thing, do you think that for example eh making ehm nice attractive green spaces in LH and enfencing them, would that be a solution? Or do you think that's not really sustainable and maybe also is not really, is against the idea of what a public open space should be? When you enfence it.
A: No, I think it's .. It would be a good start. But two things. One is your fence would probably be stolen within the first day or two. Honestly. Ehm and secondly, were it to remain in place, you still need to police it. So the fence is, is a minor part in a sense. The fence, whether it's a virtual fence or an actual fence, it has to be policed. End of story. If you had that, you would have those parks full of people. I believe. And children and adults alike. If, if that was safe. But because they are not safe, and it's not safe to go out of your door. Let alone walk down the street or park. You're not gonna get that. So yeah, policing is everything.
N: Yeah, that's also probably why people from, I think it's the people from Vrygrond and from LH it's the ones that travel furthest to go to their favourite UGS. Ehm yeah probably also because the people from MdG have their favourite UGS in front of their door.
A: Yeah, well I mean. Yeah, they can get in their car and drive to, to the beach or to the mountains.
N: But they don't. So the people from, haha I have a figure about this. I think it's people from ehm let me see, from LH and Vrygrond that travel furthest. Ah, here, this is the one. Oh, no that's not true what I see. So this is how, the median travel distance to favourite urban green space. So people from Muizenberg and yeah Vrygrond/Capricorn, they travel the furthest. This is about their favourite UGS, but I think the results were similar for the green space they visit most often. That's ehm here. This figure. Median. This one. Most frequently visited. Yeah, now that's, that's not really, doesn't say that much, this figure. But now here, this is interesting. So the richer people are, the less they travel to the green space they visit most often. Do you think this is because they are closer by the green spaces they visit? Probably, right?
A: So just explain this figure.

N: So the question was which UGS do you visit most often? And then I calculated, I know where they live, they told me their address, and then I calculated how far that is from their house. Ehm and here I eh divided it per income group. So it means that people with no income on average, no sorry, the median person travels 6kms to the GS they visit most often, whereas people that earn 500 000 or more only travel 1km to the UGS they visit most often.
A: It might be location. So that might be the first thing. Ehm yeah it's interesting that .. It would be nice to know your N-numbers, but ehm.
N: Yeah, for this one really small. That's why it's not representative. And also 500 000 and more is also I think not representative. But the rest is. They are quite high numbers.
A: Yeah. Yeah. Yeah, I think, but that could be an urban planning, you know, thing as well. Is that if you've got a, if you've got a park right by because it was planned properly, then you don't have to travel miles. And it would be interesting to understand, you have that information. Why they're doing it. Is it to walk their dogs? Ehm so which a lot of people do. Or is it to just get out to, to nature? And I think that's ehm knowing Cape Tonians, a lot of people will take their dogs at the end of the day and go and, and walk them. so that's ehm. And maybe in the weekends, you know, really, you know, walk into the mountains. But at the end of the day, you know. What is their favourite GOS as well. Ehm
N: Yeah it's also, I think ehm maybe I think a bit that for eh people from the poor areas their favourite UGS is ehm, like, they don't have the opportunity to visit all of Cape Town, so they only know of a few UGS and one of those must be their favourite one.
A: Yes, yes, yes. And also, are they going there, for what reason are they going there as well? You know, is it for a braai with their, you know, friends and family on a weekend? Or is it ehm just to, to go and sit and, and enjoy nature? And ehm yeah, I would be interested to know what that is.
N: I think especially for the lower eh income groups ehm they go there for a braai and be with friends and family. Whereas for I think for the higher income groups it's more to relax. Because obviously they have their own garden. So if they wanna braai, they don't have to go, you know.
A: Invite your friends and family around, and you've got the space around you. Exactly.
N: Yes. Ehm one thing, ehm, yeah, so ehm you say that people who got in contact with nature are ehm more likely to have ehm pro-environmental behaviour. Ehm, one thing I found with this ehm, with this study is that eh people from eh Vrygrond, Capricorn and Lavender Hill, they don't find the environmental aspect of green spaces very important. They find the social aspect of green spaces more important. Do you think that's problematic, that they don't appreciate the environmental aspect as much as people from other neighbourhoods do?
A: Problematic in a sense that they might not see repercussions of their behaviour. If you litter, you pollute. It doesn't matter. The environment, you know. So, yeah in that sense, definitely. Yeah, definitely problematic. But I think key to all is that you have to, it has to be seen as, there has to be a positive association with it. That's the first step. So whether it's social or environmental. In a sense one might argue, does it matter? Because if you appreciate it, going there, you're going to want to stay. So first thing is to keep it staying. So then you've got a public voice against, well, no, you can't develop it, because we want that space. You know, we want it for social reasons, we want it for emotional eh, religious, whatever the reason is. That's the first thing. So it's important for people to have an association and a voice. The environmental aspects, that can come through education. Ehm and I think, and exposure. Particularly to children. But if you don't have the green space, you know, that's, that's problem number one. You know. So, so, so, yeah, I think it is, because the reality is a lot of the, the environmental destruction is as a result of bad behaviour. But in reality your, your wealthy people creating more environmental problems. In the end. In terms of resources and all the rest. But they have the knowledge. So, you know ehm, I think it's, it's eh, it's a challenge across the board. Is to have people understand environmental impact and the importance for behavioural change. Ehm, so no. So, I don't know if I answered it correctly, or as you would hope, but the social aspect and the, and the environmental aspect. There has to be an association. A positive association. And appreciation. The environmental component can be, can be improved upon. And you just, you know, noticeboards, education programs, whatever it may be. Don't litter. Don't throw this on that sight. So, you know.
N: Yes, and that's maybe also why you probably see that people in LH litter much more. Like, if you look at the UGS there it's full of rubbish. Maybe because they eh are not that aware of the environmental damage.
A: And care. So to me if I see a chip pack it is offensive to me. But if you're living in that day to day, it's not offensive. And it doesn't have, so to me it's a negative environmental .. Ill pick it up and find a dustbin and throw it away. Whereas someone who's living in that the whole time, doesn't have that have that sense of responsibility. Why should I pick it up? The guy next to me is gonna throw it away. You know. Another chip packet away. And the other thing is also is the argument often goes, but we're creating jobs. You know. So yeah, if we litter it means someone has to be paid to pick it up. So it's actually bringing money back into our community anyway. You know? Why should we ..
N: And maybe they also have other worries than thinking of the rubbish and.
A: Exactly. Couldn't be further from most of their minds.
N: Yeah. I see. Ehm, see I have a few questions about education and children visiting UGSs but I think we already kind of answered them. Yeah. Let's see, so I have also a question about, I asked people if their children eh are able to visit UGSs. And only in Vrygrond and Lavender Hill there were people that answered no. Eh do you think ehm .. We actually talked about this question a lot. So, ehm, this is more about the conservation aspect of urban green spaces. So ehm if we look at for example Zandvlei area, you want more people to come in, but do you think ehm there is a trade-off between the frequencies of people visiting it and the conservation of the area? Ehm or is that not really an issue?
A: I think it's sort of a critical mess. Conservation, you know, at what point do you impact? And in what, in what way are those, what are the activities of those people that are coming in? So I think … the problem with, with nature conserve.. not the problem, the challenge with nature conservation. You want people to come into the nature reserve.

Because, it's pointless protecting nature and not allowing people .. You know, god knows the days that we put up a big fence and restrict people from coming in. I think the perception are there .. it's important to create that those positive associations. So you want to trek people in. and the city of cape town, in terms of warranting expense eh on conservation of of green open space, and eh .. And so in terms of, of warranting it, they want to maximize the number of people coming in. so you've got politicians and you've got the conservators. And the conservators say to the politicians, while, the reason why we are ehm conserving is because we're protecting the nature, but we're also allowing people in the area to come in and use it. So ehm, so I think that they're faced with the challenge of trying to maximize those numbers to, to show the politicians, the ones who make the decisions, that well actually, we need to protect this area and people benefit from it. Ehm from a purist point of view the reality is, as soon as you get people into an area ehm you're going to impact on animal behaviour, on ehm yeah plant protection, on poaching. You, possibility of poaching goes up. Just walking into an area and having numbers and noise, you're going to impact on ehm, on just natural eh animal behaviour. And I think that ehm, if you want to really have a sound system, eh from an ecologically functioning, you need preferably to have as big an area as possible. To ?? And also you have high-use areas and low-use areas, and I think that's, that's very important. So if you've got, if you think of a square of paper and people can access it from many points eh and there's many people, that is possible. It then just becomes a, whereas it has social benefits, the environmental benefits less. Ehm but if you have, if you break it into a mosaic of high-use areas and low-use areas ehm I think your system can function a lot better. [??] But you still have other challenges to get to. So, I don't know if that answers your question, which was if you have an increased presence, human presence in a natural area ..
N: Yeah, what the trade-off between the two is. Exactly.
A: The trade-off.
N: But that's maybe also a bit dependent on what kind of UGS it is. Is it a community park or is it a nature reserve?
A: Exactly
N: Yeah. And, like, yeah, the two obviously have very different functions. A community park is more of a social
A: Exactly
N: sort of environment.
A: And I think CT is quite a, an unusual spatial situation, where you got this incredible biodiversity that is ehm, yeah, you find nowhere else in the world. So what do you, you have to create nature conservation. I mean, if this was in, any other city in the world where biodiversity doesn't matter. If you drive 50kms out, you're still going to get the same plants and animals there, so why .. Then you can just create a totally urban mosaic of, of artificial park areas and urban environments. But in CT its quite different. And so I think the challenges are vastly different. And, yeah, so, I guess, and you said it just now, it comes down to, what is the purpose of that, of that space. Is it, is it purely conservation. Is it purely social. Kids having fun, outdoors, whatever. Or is it in between. It's nice to manage around that.
N: Yeah, it's maybe a bit like eh the area they make for braais and picnics in Zandlvei. That's the area where the bunch of the people goes. And then others.
A: Yeah, exactly. And then further, yeah, further away from that eh areas where your natural processes can take place.
N: Yeah. Ehm, I think eh we answered all the questions already. Let me check. Oh yeah, maybe about the urban sprawl. You said instead of, because there's obviously a trade-off between eh having higher urban density and maintaining UGSs, so ehm, infill development is often seen as a sustainable form of urban ehm growth. But that kind of eh it puts pressure on urban green spaces because, open spaces will be filled with houses and buildings. Ehm, how do you, what do you think about this trade-off? Cause I can see many undeveloped spaces still in CT, especially maybe around LH, there are a lot of undeveloped green spaces, ehm, you could argue, why not build some houses there and make the city more dense. But on the other hand is UGS that should be or could be used for other purposes. How do you see this?
A: Yeah, I mean, I think green, yeah, I mean green open, eh you now open green space is, a green open space, is .. Once it's hard and once the surface is hard, it, you know, it's quite difficult to converge it back again. Ehm and whilst it might not at present be seen as, as useful, the reality is, in time it is. And there are a lot of things happening on that green open space that might not be immediately apparent. Ehm, in terms of water percolation into, into the soil, ehm, reducing run-off, ehm reducing eh the rate at which water is flowing, which means you are reducing erosion. You know, there is so many different other things, that that space might provide. It might be a nesting side for particular pollinators because it needs that soil type, even though food plants is not there or it has to fly, I mean a lot of eh things happening that we might not necessarily appreciate. And the person living next door to it might not appreciate it. And whilst LH now is, is unsafe, eh in ten years time it might be safe. And then there might be a need for the opportunity or the desire to, to create a play park or, or to eh get some greenery into it for, for human mentality and peace of mind and for spiritual reasons. And as soon as you harden that surface, you change the environment entirely. So I think, yeah, I think it's an endless battle. It's an endless battle between the city managing authority, the City of Cape Town, and residents that are, are desperately ehm needing space. Ehm but yeah, I think that's just where clever urban planning comes in. And I think the city's got some incredible, it's quite visionary in a lot of the senses, in what it's trying to do. But unfortunately, as I said earlier, that the ship has sailed already. So Its trying to mend and repair as best they can, where, where that environment has changed. But there is a, there is a need across all economic levels to have access for green open space.
N: Yeah, so better not ruin it for the future.
A: Yeah, exactly. Why, yeah, why ruin it for the next generation? Cause you don't think it's necessary. So it's, yeah, public awareness I think is essential.
N: Yeah, okay. I think that's all the questions.

Louise Matschke – CTEET
20 June, 2017

N: Maybe it's also ehm good that you first eh maybe explain a bit what you do at CTEET.
L: Okay. Ehm, so I'm the education and training manager, which basically means I look after the learnerships, the internships, the [??]-students. Any kind of training and development of skills program that we have. So at the moment it's 2 learnerships and 2 different internships. We are about to go into a whole batch of new interns, new [??]-interns, new skills programs, new learner.. yeah, the whole lot of them. and bircheries[??] and then the other part of my job is the education side which is the environmental education centre down at ehm what we.. what you would've known as ZEEP or ZEEK. So, it's to look after the.. al the facilities there and whatever they do. So everything from just the camps, the day programmes, the conservation leadership programme, and also the eco-school programme.
N: That's interesting. Okay, so my first question is a really general question. What do you think that presently are the biggest issues around ehh people's urban green space attitudes in CT?
L: I think a lot of it is, this is my perception, but I would think it's probably safety ehm, CT, but SA as a whole, would be very much around safety. So ehm, going out to the park, you know, what could happen when you're walking home, or walking there, on in the park itself. depending on the park. So I think a general ehm, just for a bit of background, I come from Johannesburg and there's a lot of green spaces there. Not as much as here. Ehm but they're not as well utilized as they are down here. But I think the major concern down here would be safety.
N: Okay and does that affect eh, you think that affects how people use green spaces?
L: I think, I don't know if you just mean to speak about CT?
N: Yeah.
L: I think, in, so I've been here for three years and I've noticed that a lot of people use a lot of spaces, but then there's certain spaces where things that happened, that people have kind of stopped using. Ehm or they only go there in large groups. They wouldn't go there necessarily, you know, to run or to cycle or walk their dog on their own. Ehm to me an example of that is Wynberg Park. It's just because there's a lot of trees and a lot of places where, you know, bad people could hide. Not a big open.. you know, you can't see for miles and miles. Ehm where, so it's not as well used as something like, let's say Tokai Park where there's also a lot of trees, but there's a lot of people using that at certain times. Even though that something bad has also happened there.
N: Yeah, I heard.
L: Yeah. So it just really does depend. But I think it's a lot, it .. a lot of those places are well utilized but it just depends where that space is.
N: Okay. So ehm I've researched how often people visit UGSs, I actually brought figures to.. yeah, so here in this figure you can see, this is the median number of UGS-visits per year per neighbourhood, and especially people from LH, isf you compare it to for ex. MdG, it's really low.
L: Really low.
N: Yeah. So how, eh why do you think there's such a big difference.
L: If I look at the areas that you've got there, ehm, LH, from what I've seen from driving through there, there's very little open spaces there. And the open spaces, a lot of it is used for dumping. Ehm which immediately makes it unsafe. Not from, from a crime perspective, but just that there's glass or whatever.
N: From a health perspective.
L: From a health perspective. Yeah. Whereas something like MdG is, there's a lot of space to walk. There's a lot of space to use the water, for canoeing or whatever water sports you are about to do, and Muizenberg is the same. Also quite a lot of open areas, but also the mountain and the beach which is also very well utilized. So I think in terms of the areas is probably the amount of space that there is to actually walk around, or to be outside. Ehm, more that, and I don't know much of where Sheraton is.
N: Oh Sheraton Park and Coniston Park, it's just South of Steenberg and Retreat. I think it's eh a middle income area. Or lower-middle income area.
L: Okay, so from my perspective of driving through those different areas, is rather people playing outside of their houses in the streets, and there might be a small open plot or whatever, but a lot of kids are playing like literally on their pavements or in the streets. They are not wandering down to their own local park or whatever. Ehm whereas for MdG and Muizenberg is pretty much on their doorstep. Lakeside, even the open spaces are on their doorstep. They literally go down, it's right there. And that to me would be the difference. So if you access, or if there is actually a green space for them to use, and then a lot of those areas are very, there's huge crime issues in those areas. So it would be safety from both perspective. Health and crime.
N: So it's both the amount that is available, and thus eh it also plays a role if they can access because ehm MdG for ex. is quite close by LH. Is it that ehm maybe people don't want to go there, or they don't know is there, or they just don't have the means to get there.
L: It's, eh Capricorn particularly and Vrygrond is almost opposite road from MdG.
N: Oh yes, sorry. That's what I meant.
L: No, that's fine. In terms of accessibility, they could go there, ehm, but I know MdG particularly there's a lot of security blocks there. So I don't think people feel as free to go there. So, I mean the houses are built around a lot of those areas, so it's almost, you know, it's almost like entering an estate. Ehm, but it's not that strict, but that's the kind of idea that you get. That's almost that the people from these areas would necessarily be allowed there.
N: They're not really welcome to use the spaces.
L: Yeah. They will probably get reported to the neighbourhood watch or the security.

N: Yeah?
L: They will probably get hassled a bit, I think.
N: So, you don't think it's a big issue that people don't understand eh the benefits of going to UGSs, or would that also play a role in the times they would visit them?
L: I think the times .. well, ehm, and also I would .. it depends on what they say. Because a lot of these people are walking through huge open spaces from the trains, which is in Retreat, or Steenberg, and they're walking through a big, huge open space to get home.
N: Yeah, I know which one.
L: So they might not see them, see that as using an open space. Cause it's just their walking home, or their walking to work or whatever. Eh whereas the people that you probably interviewed in that area are more like: oh yes, at night I do this, I go out, I do that, I do whatever. So it might just be a conception of what is an open space.
N: Yeah, that's a good one. I haven't thought about that yet, could very well be.
L: The reasons why I'm saying that, you've just done a whole lot of interviews asking people what is their outdoor activities, and ehm their battle to actually say that. But when you probed them, they were like, oh I used to herd cattle or I used to do this outside, or I used to do that, I go to the beach with my friend. They don't .. ehm, not .. yeah understand the terminology or .. where walking to work, being outside, that counts.
N: Yeah, that's true. Actually, a lot of people at first don't understand what I mean with a green space. That it could also be just a little patch of grass that they don't eh normally see .. that they don't see as a park or anything.
L: And some people might see the park, which is all concrete and special flooring and whatever, they might not see it as a green space, because it's not nature.
N: Yeah. So also one of the finding actually that's this figure, ehm this is about ehm, no this is actually not the figure. Doesn't matter. So I asked people if their children had the opportunity to visit green spaces. And only in Capricorn/Vrygrond and in LH there were people that said that their children never had the opportunity to visit green spaces. How do you think that this will affect their eh, their attitudes towards green spaces.
L: I don't think they see them as valuable. I don't think they understand why they're there. So the LH, Vrygrond, Capricorn are all bordering on a big green space. Rondevlei nature reserve. And parts of Zeekoevlei as well. And ehm but obviously access is restricted to, to those area. So I don't think they would understand why they would need a particular space if they aren't allowed access to it all to experience it. Get to understand why it's important and why it's there.
N: yeah. But do you think if they do get exposed to it that they will understand why it's important. So, I think many of the people maybe never really visited UGSs. Do you think their idea would change when they visit?
L: I think so yeah. So they get to see why it's there. Ehm so it's [??] go into the reserve. For example,. They see that there's hippos', there's other things, there's a reason why that fence it there. It's to keep the hippo's in, whatever.
N: Not to keep them out.
L: Not necessarily to keep them out. You know, if they get explained how special a particular place is, other then from a cultural aspect or an economic or the four aspects that you have. Any of those. I think yeah, they would be more inclined to care for it. Or to understand why it's there and want it there
N: Yeah, that's interesting that you mention that because ehm most people find, this is, the grey areas are how many people think the environmental aspect of UGSs is most important. And by far most people think that the environmental aspect is most important. But you see that, especially in .. this one is not representative, I had not enough respondents here. Ehmm.. especially in LH eh people find the economic ..
L: Economic
N: Yeah, and the social and educational aspects eh more important. Ehm .. what was my question about this. I just lost it.
L: Haha.
N: What were we saying. So ehm, yeah, why do you think that there's such a big difference between how ehm what they find important about UGSs.
L: The different areas or?
N: For example, if we look at Muizenberg were almost 60% of people find the environmental aspect most important. If we compare that with LH where only 17% find the environmental aspect of UGS most important. Why do you think there's such a big difference? Why do people in LH find the social and economic aspect that much more important, do you think?
L: So remember that I said they go out in bigger groups. Say if you had to take an example of Prinsesvlei for example, is they .. they .. they would be upset if that had to be developed into anything, because that's for them a sight where .. it's a social sight. They get together, they have braais with the big extended family or it's a very social eh recreational area in terms of getting together with, with groups. Easy access and things like that. In terms of economics ehm, they're probably able to, to harvest [??] for example. Ehm, you know, you often see people selling flowers on the side of the road which they get from, from some of the UGSs. So there is a high economic value to those particular sites. Ehm and that's probably from direct money that they make from it rather than the site as a whole. If that makes sense.
N: Yeah, I understand what you mean. So them selling eh the flowers and food instead of ehm, I also aske the question if they think that for example it brings in tourism, that brings in money. So they think that's not really what they would think about ..
L: Well, they probably would. But it, well, depends on how the question was asked. So, and which area you were referring, referring to. So some areas it would be direct income. Whereas other areas would be a .. you know, that's

just for tourists. And to like TM for example, a lot of them would consider that just a tourist site. A lot of them wouldn't have gone there for example.
N: True. Very true. I actually had a few people who answered eh, which I found really interesting. They said that TM was their favourite UGS, and then I asked them why, and they said: because the tourists go there. I like to look at the tourists.
L: Hahahaha.
N: They're talking about me now ..
L: Hahaha. I think the difference with them is that most people in these areas particularly would use it more recreationally, so they wouldn't see it as a, an economic thing. They wouldn't see it necessarily as a place where they would hang out with their friends for example. Ehm so, yeah, they would, they would use it more recreationally than others. And the cultural thing is also quite a big thing in those areas.
N: Yeah true.
L: And I think the reason for that is that ehm, for religious things. I've seen a lot of baptisms happening in Muizenberg particularly.
N: In the sea?
L: In the sea. And then also in some of the Vleis as well. So they might see that as .. a lot more cultural influence there. And them ehm these areas have a big cultural tie to certain areas like Prinsesvlei for example. So there is a whole urban legend about Khoi-San, Prinsesvlei.
N: Oh yeah, I heard that legend. Is that with the, the crying princes that filled the..?
L: Yes
N: It's a beautiful story, I really like it.
L: So when they wanted to put the shopping mall in Prinsesvlei it was ehm seen as a cultural site. As much as it was a, a recreational site or open space. Ehm which kind of stopped the City or developers from making it into a mall. Which could've brought more jobs and more everything else, ehm, but yeah the cultural and the kind of open space environment, social side won for that particular site.
N: Yeah, was it also a lot of people from those communities that voiced against it?
L: Yeah.
N: That's cool.
L: It was exactly those communities. And grassy park as well. It's not in there, but I mean they're all, all together in groups.
N: Yeah. Okay. I see. Ehm.. yeah, also what I found is that certain people travel much further to their favourite UGS than others, and it's specifically ehm, I also asked eh about eh people's ethnicity, and it's especially coloured people who travel furthest.
L: Seriously?
N: Yes.
L: Wow.
N: At first I was surprised by it, but then I thought maybe it's not because they want to travel further but because they have to travel further. What do you think about that?
L: Hm, it's .. it could be. So, I mean if we look at those 3 sites again, I mean it's literally on a whole lot of open spaces. Zandvlei, the sea, the mountain, ehm, it's on their doorsteps. Where they would .. [??]discuss[??] or rather have a really long walk. Or, you know, have to take transport to get to a particular place. So, I think travelling would've come out stronger there, because they would, would need to travel. If it's just down the road or if it's quite a distance, they more likely to have to travel. Because of the access to, to certain areas.
N: Hmm.. So do you think that this could be ehm rooted in eh apartheid history? Because the city is laid out as it is, very much because of Apartheid. Do you think that it influences now how people eh have access to UGSs?
L: Yeah, maybe. If you look at eh all the, the kind of more green and more open .. all the bit of open spaces are all around more wealthy communities. Ehm, and I mean, just the whole Cape Flats area, if you look at Khayelitsha and Mitchell's Plain, and the reason why they are out there in the middle of nowhere almost, all was historically, is so that they would not be mingling with, yeah, with the upper class.
N: And ehm, they are obviously in that time when people were relocated eh UGSs not really something you would think about. That's more something for rich white people.
L: Yeah, yeah, yeah.
N: Ehm.. So, ehm, when we look at the UGSs right now, ehm there's of course still a lot not going very well. Do you think it's eh at the City level that eh these issues should be tackled? Like, for example, accessibility and availability of UGSs? Or is it more something that communities themselves should be responsible for?
L: It will be eh a combination ehm and it depends on the communities needs. See, if the community wants a eh housing project rather, or housing provided, they're not going to put necessarily a green space on the agenda. Ehm, if they, but I mean, yeah, I think it's [??]. I think the community has to push forth something. It's not going to happen if it doesn't come from the community. And with a strong enough following for it. So it can't just be like, three people that want a park, but a 150 people want a house there rather, or houses. Ehm but then the City .. it could be City land, or it could be ehm .. land that the community might not be able to obtain. in some way or another. Or get access to. So that would come from higher levels. In the City. So I think that would be both. So if you look at some, like the ward councillors, or the sub-councils or whatever. They would know what their communities .. well, they should know, what their communities need.

N: Yeah. But what then .. what if people that live in certain communities don't ehm .. the people that don't understand the benefits of UGSs, they will not be the ones asking for it, because of the fact that they don't understand the benefits of them.
L: I think it depends on the area. For example, there's a very small reserve in the east. Harmony flats nature reserve. And that was actually pushed for by the community. Who still need housing to this day. And at the .. eh, ??immunities??. But they understood the value of that particular patch of land in terms of the biodiversity. So the environment that was there. And it was spearheaded by particular people that had studied ehm, [??] but still [??] with community, and had a particular interest in it to start of with. But they rallied enough of the community together to have that patch proclaimed.
N: So it was those educated people that taught others the value op it, and that's why, once people understood the value of it, they would ..
L: Yes.
N: That's interesting Eh, I also asked people, that/s this figure. The question was, do you think that UGSs occupy space that would be more useful to use as space for buildings and for housing. And it was especially then again in LH where people agreed with this. Ehm that actually the .. open spaces should be developed, and there should be houses. And especially people in MdG and Lakeside people disagreed with that. Why do you think the difference is that big?
L: Hmm.. Heh, well, both of them live on the open spaces. So I don't .. besides from building on the water, or the few little patches of green, will bring down their property value to be honest, if they would build any more houses on there. In terms of them, as I said, a lot of the open spaces that are there, are turned into dump sites. Or improperly managed, or run down, whatever. So they would probably, like, we would look at it, if you look at dumpsites, oh that would probably be better as a block of flats rather. Or a little shop or a clinic, or .. whatever. So, yeah, I think in terms .. and the people in these areas don't have housing. It's not their own, or it's informal settlements. Ehm, so, yeah, I mean if you had to give them the choice, they probably would ask for that. But it also would depend on, on the group of people. There would be some that would say: oh, maybe that place that's ruined and a wreck, ehm can be used. But this space that's pristine, or not pristine, but you know, still has natural vegetation or a wetland or whatever, needs to stay.
N: Yeah, it was a very general question, so I didn't really go into that, but that could indeed be ehm .. make much of a difference. Ehm, let me see, ehm, this question is answered. Yeah, oh so, yeah. On the website of CTEET I read eh a sentence that said: through this process eh creating the opportunities for children to reconnect with nature, and through a variety of programmes and activities. That 'reconnect', eh does that mean that children lost connection with nature over the years.
L: Our human race as a whole. Not necessarily children. But humans as a whole. The more developed we become, the more disconnected we become, and ehm, there's a lot of research out there in developed countries, where they, they are reconnecting. And they're starting with children, because it's easier. Reconnecting children back to nature. And ehm, so, I read something recently. In Germany they've got a whole lot of what they call forest school. And nature school particularly. Where they are starting ehm getting the kids out into nature a lot more. And the main reason for them not being outside is all the misbelieves about crime and germs and health and whatever. Ehm and obviously the, the safety. But then obviously technology. Where, you know, we sit in front of the screen, whatever it might be. For 8 hours or more every day. Ehm, yeah. So the ehm, that's the kind of, the reconnection but I think as a whole, I think it's a whole human race and we mean, we'd rather watch a program on whales and sharks and things that happen on the beach than actually go down to the beach. Hahaha.
N: Until you see a whale in real life and realize how much cooler it is in real life.
L: Haha yes!
N: I actually saw a whale a few weeks ago in Muizenberg and it was amazing.
L: Ahhh cool! Awesome.
N: It was maybe the best day of my life.
L: Awesome! Haha
N: Haha. Let me see. Oh, you actually just answered why it's important to, especially eh have children visit UGSs, it's because they are still like .. you can still form them?
L: Yeah, I think they're a lot less set in their ways than adults are. So ehm, you know, for an adult it takes 21 days they say to break a bad habit.
N: 21?
L: Yeah, so smoking or whatever. So if you had to cons.. like, try to get an adult to do it, you'd have to do it everyday for them for over 21 days for them to go: okay. Now I see the value here. Where, as a kid you can show them something cool outside, or show them, you know how to play in the street or whatever, and they'd be excited about that and want to keep doing that on their own. They wouldn't need a push. So it would be .. I think it is easier with children because they are easier to shape and, at certain ages everything is wow! Ehm, yeah, then, then adults who is a little harder to .. to shape.
N: Yeah. That is also in .. in LH the .. only in Vrygrond, Capricorn and LH that mentioned that their children never played outside, never visited green spaces actually. Not that they never played outside but yeah, that they never visit green spaces. Ehm, do you think that something like that could be resolved by showing the children themselves eh why and how to play outside or should also the parents be involved in this?
L: I think it would be a combination of both. I think to get the kids outside, it's obviously more important. I think also is to understand, 'cause I think if you get to ask them, do they play outside in this patch of sand outside the .. their informal housing, or just down the road where there's a bit [??] full of sand, if they play they, they probably would say yes. But if you had to ask them, do they go to TM or into the nature reserve, they probably would say no, and that's

than an access issue. Ehm, ehm, so it would depend on, on the question, but I think yes, both should be involved, because .. the adults probably have an impression that it's, it's an elitist thing, that only certain people can get to go there. Ehm, so like any reserve in .. across the world, across country, you know, there's that .. people living on the outskirts of a reserve that have never been there. Ehm.. but that's not to say that they can't. they just, they just don't. ehm, they never try. If I can put it like that. So, they never go to the gates and say: how much is it, can I just go? Or whatever. They don't find out what's happening. They just kind of stay there.
N: What is familiar to them.
L: Yeah. I'm pretty sure if you had to ask them if they ever been to the beach of Prinsesvlei or Zandvlei they would probably say yes.
N: Yeah, I told them beforehand that an UGS is not just something that is green, but it can be a beach, a mountain, a forest, even a little patch of grass. And then, actually, yeah, I think Muizenberg is maybe the most often visited UGS of all, of all of them.
L: Yeah because of locality in that sample area.
N: Yeah, and like, most people they, they walk there maybe once a week, or. Ehm. Yeah. Especially people from Vrygrond and from Capricorn. They go there a lot. Ehm, yeah, so I think maybe also, especially in LH of course safety is a big issue. Ehm, so ehm do you think that ehm fencing the green spaces there would be a solution. Or is that a bit ehm against the whole idea of public, public green space?
L: Again, it would depend on the type of space that it is. So if it's like a nature reserve, which is a protected, particular thing, then, yes. Eh, it should be fenced off, because you know, the people don't go pick things or get stomped by a hippo or whatever. But if it's like a park or a garden or .. ehm, you know, then it would be appropriate for whatever the activity is. So if it's a kids park, that shouldn't be necessary fenced off. If it's a little veggie garden, then maybe just fence off that dogs and cats can't get in that, but there's access for .. kind of easy access for people to move through it. So, yah, it depends on the type of .. type of open space it is.
N: Yea, I see. So you don't think that a children's playground should be fenced to protect the children play8ing there from, I don't know, unwanted visitors.
L: No, because they would then.. there's a few areas that have been blocked off like that, and they seem to be yet .. less utilized. And spaces that are open that they can almost move freely, cause as soon as you put up that fence, it's like: ooh, this is an unsafe place to go. That intermediate area. Whereas if it's open but there's a security guard wandering around for example, that might be different to ward off creepy people. The fence is not gonna stop creepy people. Hehe.
N: That's true. I was also thinking about, for example, GPP. That's also fenced and there's also security guards outside.
L: But that's, I think that's to close it off at night.
N: Yeah. True.
L: During the day, I mean, you can go from various entrances. Nobody actually stops you. It's fenced off.. probably more .. and it's not a small space. It's a big space. You don't .. you go in and you don't necessarily feel like you're boxed in.
N: That's true. It doesn't feel like that. Also maybe because the gate is really big, so if you walk in, you don't feel that you're going through a door, hey?
L: No. so if it was one little exit in and out, it would give you that impression that you kind of almost not welcome there, in that sense. But like you say, GPP is big. You don't really see the fences. There is a huge gate and it does get locked off after a certain time. and that's just to avoid criminal activity at night.
N: so it really depends on what kind of UGS we're talking about.
L: Yeah.
N: So, about conservation. Obviously it's important for a city to have more people visiting UGS. but on the other hand, having more people in certain spaces in for ex. Zandvlei would maybe affect biodiversity. Ehm, how do you think .. what kind of balance should there be between the two?
L: I think it's that .. like, ehm, I mean, part of Zandlvei is .. is eh part of Zandlvei is an open area, which .. Marina da Gama, and part of Zandvlei is just and open park where anybody can use it .. go fishing, go have a braai. There's sports fields, there's .. so it's almost a multi-use area. And then there's a patch that's just a reserve. And ehm so.. I think that kind of approach to any space is a good idea. Is to have multi use zones. Obviously my conservation brain is saying that it should be more conservation than anything else. Haha
N: Yeah hahaha
L: But ehm, I mean, there needs to be, you know, a safe place for kids to play, even if it's just a big field to play soccer on, or rugby, or cricket or whatever they wanna do. So Zandvlei or even Zeekoevlei is a good example of that. That there is a side to be social. Have picnics. Have a braai. Whatever. And on the other side it's more conservation oriented.
N: Yeah, I see. I think we already went through all the questions.
L: GPP would be another example of this.
N: Oh yeah.
L: There's different kind of zones within the park. Of, of, different ways to use the side. So there's the sports field, the bowling green and the, you know just the.. there's patches of just like long grass that is growing for certain birds to nest, and yeah, there's a combination.. there's the educational side of the different types of gardens, for people to learn about the fynbos or whatever it is.
N: Yea, because I think when people visit Zandvlei, they go there for the social reasons.
L: Yes.

N: But then they also don't learn about the environmental aspect. Whereas maybe in GPP, if you visit it for social reasons, because there's this biodiversity garden, that's really inside this area, you would also be more likely to visit that and learn about eh environmental importance of yeah, of UGSs.
L: Yeah. I think you have to ask people, if they knew there was a Zandvlei nature reserve. I'm pretty sure they would say no. if they know that there's a campsite. They know they can go and have a picnic or there's sports fields or whatever. But I don't think they would know there's a whole other patch of it that's actual nature reserve.
N: yeah, true. By far most of the people that visit Zandvlei go to the district park where they can braai and things. And I think it's more the people for MdG and Muizenberg and Lakeside that also visit the nature reserve. But, yeah. Its again a big difference between which people visit which section of Zandvlei.
L: Yeah.
N: Ehm, let me think. I just had another question but it escaped my mind.
L: Hihi.
N: Ehm, but. Maybe it will come back to me later. Ehm. So .. ehm..
[chit chat]

N: Also, some, like, this for example. How strikingly similar people think.
L: Vandalism and criminality.
N: Yeah. I would've expected there would be a lot of variety here. But there's not. Which is, I also find interesting.
L: What was the question related to that?
N: Eh the question was if people agree that UGSs induce criminality and vandalism.
L: Ah, yah. I think that would be a common thing.
N: I would've thought that people from MdG would agree more with it maybe because they think that in other areas, that's what's happening. Whereas maybe people in LH they understand that it's not because of the UGS that there's criminality. So I expected people for LH to disagree and people from MdG to agree. But, no, that didn't happen at all. Which is also quite interesting I think.
L: It's a fake .. it's, I think if you had to go deeper into how does it affect them, then you'd see the differences. Ehm, you know, like, in LH it's maybe they would say, open spaces are completely wrecked. You know, people just break everything. I don't know, I' just generalizing now. Whereas vandalism, the other side, you know, things might get stolen there. But they can still use the space. Ehm I know a lot of .. this is also coming from, from a Joburg perspective, is a lot of the green spaces were seen as a hub of criminal activity. You now, that you never walk through a wetland, but you never walk near weeds, 'cause that's where you would get dragged into the bushes. So ehm, yeah it's that kind of general, general sense. So, it would just depend on further questioning. But I think .. I could understand that result. I think it would just be different perspectives of it.
N: Yeah, that's the sad thing about doing the survey .. you only get the first answer and you don't go deeper into it.
[chit chat]

L: Yeah, I think it would be general, because crime affects everybody. Or vandalism and criminality. It hits everybody. But it would just be, you know, they might say, ooh it gets spray-painted or. You know, like, they stole the fence or something. Whereas, for others, that's where you get attacked and killed and whatever.
N: I think that would be more the perspective from the …
L: Hahahaha. I mean, news is broadcasted so wild in CT, if anything happened in a particular open area. Like the whole case in Tokai Forest. Eh, think that was felt amongst the different communities. It didn't really matter where you lived. Everybody felt it, if that makes sense. So it would be a general response.
N: Yeah. Yeah. So you think that is because people hear the same stories about what's happening?
L: Hmhm. I think it's starting to hit more these people. They've lived with this forever. And these people are starting to see it now more and more and more. But yah, it is, you know, social media is powerful.
N: Yeah
[chit chat]

website called Children in Nature.

Dalton Gibbs – Conservation; City of Cape Town
20 June, 2017

[Chit chat]

N: Maybe it's good that you explain also eh beforehand shortly eh what you do. I heard from Anthony that you founded CTEET actually? Or..
D: Yeah, I was involved in founding CTEET, but that's not really what I do. I do nature conservation with the City. So we, the municipality, so are you familiar with the kind of conservation of the NP's, they're preferential in the city. Like a hierarchy of government. We're bottom in the City. The bottom of the food chain, aren't we? So I run nature reserves in the South provinces. And I deal with biodiversity related factors in the Southern parts. Yeah.
N: Okay.
D: So similar to green open spaces like the Muizenberg area, Zandvlei [??]
N: Okay. Ehm yeah ehmm .. My first question is ehm quite a general question. Ehm, what do you think that currently are the biggest issues in CT ehm concerning UGS attitudes? People's UGS attitudes.
D: Attitudes, or the actual green space? Because the biggest problem with green space is security.
N: Yeah.
D: The biggest problem with the green space itself is that they're not safe. And the biggest attitude problem is that most people don't care. A lot of people don't care about them.
N: Why do you think it is that people don't care about green spaces?
D: Because of a lot of reasons. People have other priorities and that links to your economic well-being. So you have other things to worry about then to worry about green open space, and for wealthy people it's a, it's a security thing. They're perceived to be not safe. Some areas they aren't safe.
N: Yeah. Okay. Ehm, so ehmm, I've eh asked, so I asked people how often they visit UGSs and ehmm I thought the difference between the different neighbourhood people live is quite striking. So, here you can see. Ehm, yeah, the figure here on top, it shows the median number of UGS-visits per year. You see that, yeah, MdG naturally people go almost daily. The average person in MdG. Whereas in for example people in LH go very very little. Why do you think the difference is that big? Even though they .. Al these areas are quite close to each other and have ..
D: Yeah, ehm there's a whole lot of reasons. One is accessibility. Although there's, I mean, certain parks next to Zandvlei nature reserve which are managed. Sheraton Park, we deal with the Sheraton Park. Some of them are right next-door to it, to this open space. So this doesn't account for that. But for some people it's accessibility. So like, LH eh a lot of green spaces you can't necessarily get to. Ehm and then the other big factor is security. So most of those people from MdG are going onto Park Island. And they haven't had a dead body in Park Island for three years now. So, I deal with a lot of dead bodies and stuff like that. So MdG, people going onto ehm .. All the years I have been managing it, only one person murdered from MdG. So people perceive it as relatively safe. Ehm so a lot of that, also be related to the perceived security of the nearest accessible green open space. So depends a lot .. yeah. So at Sheraton Park, there I can't account for why people aren't going. It can only be that the perceived space is not safe. Places like Vrygrond, LH, Seawinds, it's hard to get to a green open space. It's an accessibility issue.
N: Okay. You don't think it's ehm an availability issue.
D: That's what I mean. The accessibility and availability. Same thing.
N: Okay. So, ehm, is it also the eh access that people have to transportation to get to the various UGSs?
D: Yeah, and something like, when you talk about a green space, I assume you're also including an urban park. The corner of the road. Like Vrygrond/LH, those parks aren't safe. It's where the drug dealers to their business. Yeah, so to get to a safe green open space, it's just not accessible. So in some cases like LH or the .. There's small GOSs that are available. People aren't using them. they're not safe. To get to a larger place like the one that the MdG residents are accessing, it's two kilometres away, 2,5kms away. You have to walk there. There is no taxi there. Even if you wanted to go.
N: And do you think that ehm people, that it matters that people maybe don't understand the benefits that visiting UGSs would have for them? or do you think that .. it's not a thing?
D: yeah, I think it's probably a, it's probably a big one. And it's also probably inked to eh a culture. You know? You don't.. Your parents didn't go, so you don't go. Apart from not understanding the benefits of being in a green open space, it's just something: you don't do what your parents didn't do. So you're continuing the culture. It's not something that's valued.
N: Yeah. Ehm so you mentioned that safety is a big issue. Ehm, do you think that putting fences around certain UGSs would make a difference? Or do you think it's maybe a bit against what a public space stands for?
D: You would have to define what a public space is then.
N: Ehm so for me, in my research a UGS is anything that's covered in grass or vegetation. It can even be beaches. So it's like, even a small undeveloped ehh open space would count as a green space.
D: Okay, that's quite difficult because some of the GOSs are nature reserves. Their primary purpose is not recreational. Their primary purposes is to support biodiversity. In order to support biodiversity, in some cases, not all cases, you have to put a fence up. So the fence is not necessarily there to make it safer for people. Its to make it safer for animals so they don't get dogs et cetera, et cetera. So it's a difficult, it's a complicated question. Because, that's why, it defy .. sometimes you need a fence, not for the people. But for the animals. If you ignore that, then yes. In certain circumstances, in certain very specific circumstances, where security is a huge issue, to make it a safe space, you have to restrict access. And ehm, so ehh yeah, you mentioned ehmmm like, if the parents didn't go, children don't have really .. think about going into UGSs. Do you think that the fact that in certain areas people go very little, do you

think that somehow rooted in history? Maybe in apartheid history that certain people were ehh forced away from the area where they lived close to nature?
D: I don't think that's .. if you look at the Cape Flats. I know the history of the Cape Flats quite well. Ironically I don't think .. I think actually the opposite is true. In many cases where you had apartheid resettlement people were moved to more natural areas. Moved out of urban areas and into more natural areas. So no, I actually don't think that's necessarily that. It also can be a reflection that in fact, those people in those areas haven't that much leisure time. leisure time is a function of economics. And if you're living in [??] with your 9 to 9 job and you have a second job on the side, when are you gonna go visit a GOS? So, I think there's a link probably a lot more to economics. Economics of apartheid than actual the spatial planning of apartheid. So actually, I think that some of the suburbs, the apartheid planning actually made more access to wild natural open spaces. Not necessarily planned open spaces.
N: Do you mean for ex. LH being very close to Zeekoevlei and Zandvlei and Rondevlei?
D: Yeah. They're right next to the bush. Lots of natural open space.
N: Yeah, but you see that those people go very little.
D: Yeah, so I think it could be more, that could be more a ehm phenomenon of a culture of not necessarily visiting open spaces, and also a question of economics. Time. I think that's the biggest factor than, I don't think apartheid planning affected it that much. Ehm that's why I think it's more a function of apartheid economics maybe, and economic factors. And time. time is [??]. so include time and economics in the same spectrum.
N: Yeah, I see.
D: I think that's a much bigger driving force than the spatial layout.
N: Okay. Ehm, one of the things I found is that ehm especially I think in Capricorn/Vrygrond and LH, ehm people said that their children never had the opportunity to go outside, to go into UGS. how do you think that will affect eh those children's green space attitudes?
D: Ehm, well it depends why they couldn't go outside. If you told your child: you can't go outside, because I'm busy cooking supper. Well, then the green space is neutral. If I tell you ass a kid, you can't go outside because the green space is dangerous, then that's negative. So, difficult to answer the question.
N: Yeah, it depends.
D: Yeah, it depends entirely. If your parents are saying: you can't go because it's dangerous, then all green spaces for you become, a negative thing. If I'm a decision maker I don't wanna support them, because I see them negative. As I say, if it's a case that we just don't go there because there's something more interesting on TV, you know, I mean having family time, or as I say, I've gotta work late, then that open space is a, it's neutral. So it, yeah. I wouldn't want to have to guess. I don't know what's being conveyed. I think in a lot of cases, the message is being conveyed is that they're dangerous. And in many cases, people are right in making that assumption. In which case it would create a negative perception.
N: Yeah. I asked people actually if they thought that, these two figures, if they thought that UGSs would induce criminality or vandalism, or if they create dark and hiding places. And eh, yeah, 0 is strongly disagree, 5 is strongly agree. And I found it quite interesting that there's not a lot of difference between the neighbourhood's, like, I would've expected to see people in MdG answering much differently from people in LH. But there's not a lot of difference. Whereas for people saying it creates dark and hiding places, you see that actually, people in LH would disagree with that.
D: Not hugely. But yeah.
N: Yeah. Ehm, do you think it's because in LH there's not a lot of green spaces that have trees, so there's not really in the green spaces there's not really anywhere to hide?
D: I think that's .. Muizenberg is a more wealthy suburb than LH. Therefore, following the same logic, more houses in Muizenberg get broken into. And they get broken into from people hiding in green open spaces. So the people in Muizenberg have more to loose, so therefore they induce it more negatively. That's how I would interpret that.
N: Yeah, I see. So, also the fact that ehm, one question was how far people have to travel to get to their ..
D: Sorry, let me just go and make the guess. I mean it's a fact, and you should ask this at the City. So we manage nature reserves. Just the nature reserves in the city. Just the nature reserves cover more than 12% of the City's surface area. It's a chunk. Go look at the map. If you take the NP up there, the area that the City of CT manages. Something like 12% of the city's surface area is nature reserves. On top of this, you still got parks and recre.. So, I mean, it's like 14% GOS. Is designated GOS. How many dedicated law enforcement officers do you think there is to cover that 14%?
N: Zero?
D: Zero. So now you should be asking the City of CT, 14% of your surface area. No dedicated law enforcement. It's not surprising that people interpret the stats. Because they know, when you walk into GOS, you're on your own. Not being watched. Not being managed.
N: And what about, for example, if I look at places like GPP, it's fenced and there are security guards in front.
D: Yeah, and where is GPP. Very rich neighbourhood. It's not a nature reserve. If you go to the coastal resorts, like Muizenberg and [??]beach [??]. They have a full-time law enforcement officer. [??] Fourteen people, just Muizenenberg [??]. Walk across the road into Zandvlei nature reserve. Zero. So there's this strange thinking which I kind of don't understand in the City's decision-making: it's as if, it's a natural open space. There wont be any crime there. And you can't .. That's why a lot of people perceive it as dangerous. Because the law enforcers are never gonna go there. They never gonna manage it. And then it accounts for a lot of this, a lot of that, that green open spaces and criminality and vandalism. It's because they know that green open spaces are not managed. The law enforcement is [??], they're not managed.
N: That's the thing that I heard most often. Things as: safety, criminality, gangsterism. Like, when I talked about UGSs with people. I think gangsterism is the word that was most often used. Yeah. So I see that people, I don't know. Ehm.

D: So similar like Muizenberg. The reason why [??] Muizenberg, MdG, is with the GOS next to my house, I have more chance of being broken into then someone in LH. Because I have a wealthier house. And that GOS is not managed by the law enforcement. That's why you're getting this results.
N: Yeah. Ehm, one of the questions I asked people is: what their favourite eh UGS is. Ehm, and ehm then I calculated from their house where they live, eh how far they have to travel to get to UGSs. And I found that ehm it, like, the distance drops per income and yeah, that it's in the poor neighbourhoods where people have to travel furthest. Do you think that these people have to travel further?
D: Again it's a function of security. It's not a function of economics. I mean, in LH, yeah, they're not particularly nice, but there's a little park on the corner. They're not gonna use the park on the corner. Unless you wanna go buy some drugs. So it's a function of, it's more a function of safety and security than a function of economics. So you found that. I mean this is very, the guys from MdG are travelling sort of 7km. yeah, that's to their favourite green space. And then you have the green space they visit most often, you see it's much less. Because most people in MdG, they visit Park Island. So this is the median. Median is 2kms. Whereas people in LH travel much further for their green space they visit most often.
D: It's not, yeah, it's not like LH hasn't got large open spaces. But they're gonna .. most people won't use them. and that is a formal park. We're not talking about any of the nature reserves. They're formal parks. Ehm, so yeah, as opposed to somewhere like Table Mountain NP, my goodness, some tourists just [??], we have 15 million police officers running around and after you. I had someone in one of my nature reserves got murdered. I got visitors murdered. No one ever pays any attention. That's what that's a function of.
N: Do you think ehm if you want to give people in LH equal access to UGSs you should have more and better quality UGSs in LH. Or should you, the other way around, make sure that people from LH get outside their community and visit UGSs outside?
D: No, the former. And the reason is, as soon as you take .. it's the same as, the one reason is why I set up CTEET here years and years ago, is that all the big overnight environmental education programs for children were kept outside of the city. Right? There was one in Cape Point, one in the West coast NP, one in [??]. all big areas outside of the city. So you put kid in the bus, drive them to Cape Point. What you just told the child, is I just told you is that there's no nature in the city. If we really go on a nature trip, I'm gonna go on a nature camp, but nature is over there. So you tell that person from LH, there's no nice places in LH. This is like a crap suburb. All the nice stuff is over there. So you're not creating any sort of civic pride, you know, creating any civic momentum, if you keep telling people of all your – get better transport so you can get somewhere. No. I think it needs to be [??]. but the first thing [??] it's not safe. So you have a parks department, and you have a safety and security department. And they don't talk to each other. So you have these park guys, and they would put a whole lot of infrastructure and stuff into a park, and I mean, Zeekoevlei, which is part of False Bay Nature Reserve, is the biggest recreational space in the South area. It's part of what I manage. We put 14.2 million Rand's worth of national government money into upgrading the infrastructure. Ehm, I mean recently I had to fix the stuff up. It was from when I fixed it up, the first door was stolen of the toilets within 2 hours of fixing it. [??] But you can't go to safety and security and say: listen, we wanna make this .. We can't do everything all at once. But we wanna make this at least as a safe space. Can you work with us? Their attitude would be: no, we got money, [??] across the city. So they want to secure an area, so instead of saying: we just secure that. Everyone else.. Let's just start with what we already have and secure that. They won't do that. They wanna respond to everything. [Difficult to hear, but what he means is that they focus on the whole city. They will not very well protect a few special places and make sure they stay intact. They are there to protect everything. But that way, not any space is well protected, all just a small bit.]
N: Why is that? Why does it need to be equally ..
D: They also have a legal prerogative, that if you phone them, they can't say to you: I'm sorry, we can't help you, because we only go to this park. They got a legal prerogative to serve everything. It's a legal thing. But, but even then, we could get extra resources. And just put them here. And then you can justify saying: at least we don't have spaces we serve zero. But there's not enough of that strategic thinking. So somewhere like LH, yeah we've got open spaces, but no one is going to use them. but to try .. and they should be safe urban spaces. Even if you only create 1, 2 of them. but because the line of functions are working inside of those, there's not integration. There's no integration saying: okay, we're gonna fix up this space. There's budget for a security officer for this space in the future. Okay great, that space is done. There's none of that thinking. And you can't get that thinking going. It's far too silent.
N: So you think it's mainly things going wrong at the City level?
D: Yeah, there's no integration of, of the current strategic planning. The strategic planning should say: I was conservation manager. I stopped. I used to run all my own law enforcement supplies. I stopped it. Because it's not my competences?? So now no one does it. It's just more and more of my areas, I mean, big chunks of my own reserves, my own staff can't work there. Staff don't go there. How is the public gonna go there?
N: Yeah.
D: So, yeah, there's not enough strategic thinking about how to secure safe open spaces.
N: I see. Ehm, one ehm ehhh so in sustainable urban growth ehmm.. it's better to have, they say, it's better to have ehh increasing densities within the city borders instead of urban sprawl. But that kind of puts pressure on the UGSs. Ehm so, how do you think that balance should be kept. Should we indeed eh for the sake of sustainable urban growth eh focus on infill development or ehmm do you think that urban sprawl should be accepted for the sake of preservation of the UGSs we have?
D: Okay, I see this from an interpretative perspective, and the answer is: the biodiversity network. So simple as that. You are familiar with the biodiversity network?
N: Yeah.

D: So I see it from a biodiversity perspective, and the biodiversity network, is to, is for CT to achieve its legislative targets. To reach the legislative targets we need to meet in terms of biodiversity, biodiversity networks that meet those targets, it should also double as GOS. So, to answer your question, we should be densifying, densifying, densifying, densifying. And intensively manage GOS. GPP is a good example. Why is GPP there? Because we built a soccer stadium. We took [?may?] for a whole lot of other project, including for my reserves, built a soccer stadium, all the residents complained, so they built a big fancy park in a rich area. Why do we got a soccer stadium in GP and not in the Cape Flats? Because FIFA wanted a shot of the soccer stadium and Table Mountain in the background. That's why the stadium is there. No logical sense that they would be planning it there. So a lot of it is purely economics. [?Very speedy?] economics in my view [??]. so should we densifying to increase the economic density as well? So if you look at a lot of our new parks, [??] park, we have an urban density in CT lower than we had in the 1930s. urban density. So now you get a little park. So what? 40 people are going to walk the park. You know. The park, 40 of them will walk to the park. We put a security officer in the park. No, no put 400 people around the park and then the security officer will pay for itself. So that economic density hasn't happened. Makes far more sense, even in terms of your GOSs: have less GOSs that are better managed. And are safe. I can't stress that enough. That are safe. Is what you need. They [??]. it's not such an accessibility issue. It's a safety issue.
N: Yeah, I see. Ehm, so ehmmm on the website of CTEET it says that people who participated in outdoor activities eh are more likely to have a pro-environmental behaviour. And that's seen as an important thing. What I found in my research is that especially people in ehmm I think it was, it was, oh yeah, it's this figure. So this is ehmm what people find the most important functions of UGSs. And ehhm overwhelmingly the answer was environmental. Especially in MdG, Muizenberg and Lakeside. Ehm, but especially in LH and Vrygrond people find the economic aspect of ehmm UGSs more important. And the social aspect. Ehm do you think it's a problem? That people don't really see. People see the environmental ehm benefits as less important than social?
D: Ehm, define economic? What does economic mean?
N: Ehm, this .. is based on 25 questions and they had to rate eh 25 function of UGSs, they had to choose between ehh very unimportant, unimportant, neutral, important, very unimportant, and
D: My question is, what is these sort of activities that someone would score economic. What are
N: So the five economic functions were ehm: attract businesses, eh attract tourism, eh provide space to find and grow food and flowers, ehmm provides jobs: maintenance, security, tour guides, anddd
D: Okay, so these are all like .. Relatively not consumptive.
N: Yeah, except for food and flowers
D: People will poach. But that's another story. Okay, so that's what the economic is.
N: Yeah, and social
D: So what was your question. Why?
N: Yeah, actually I have two questions.
D: I have no idea why Kirstenhof's like that
N: Yeah, not actually
D: But these are quite simple. People want jobs.
N: I didn't have enough respondents here. So this is, this is eh not representative. Ehm.
D: Well, those are fairly, I mean, it's economically challenged suburbs. Seawinds, interesting, it's not economic at all. No idea why Seawinds would not score any economics there. Ehm but a lot of that is economically challenged suburbs that want, I mean Sheraton is not that different to Steenberg. So what was your question again? Haha. Why I think it's like that?
N: Yeah, why, and then ehm, yeah, you just answer that. Also why, do you think that the social aspect ehm is ..
D: Oh do I think one is more important than the other?
N: No, I don't. because I don't think it's .. I mean, I'm on a job of conservation. The problem with conservation is that it's a long-term vision with some short-term gains. So you're constantly fighting with people saying: don't destroy absolutely everything. You're going to want something one day. Nobody believes you. [??] That's why I love my job. Because I get to say: I told you so, so often. Ehm, but it's that. It's suddenly a long-term gain over a short-term gain. You know, this long-term benefits or short-term gain .. and the danger exists, will you force people to .. And part of that, part of that process for me is educating people. That's why with CTEET we do a lot of environmental education. A lot of environmental education, [??]. But the danger exists that I tell you how you must enjoy open space. And you might come from a totally different social group. A different everything group to me, with a different background and, and then I tell you how you must .. No. as long as you value it in one form or another, job done. So I'm mostly cautious .. Yes, I'd like people to .. And the education programs teach people the value and the biodiversity value and that particular thing, but, if people just come, when they experience it as a positive space, well that's great
N: Doesn't matter why they value it, as long as they value it.
D: I mean, as long as it's not an illegal .. Some of the economic people steal sand to sell the sand. As long as none of this is illegal, if people view it as an economic space. Well, great. I mean it's sustainable and people appreciate it. I don't have a .. I don't .. I'm, I'm cautious to prescribe people what they should think. As long as it's a positive, it's fine by me.
N: Okay. So why do you think that people in eh LH and Capricorn value this ehmm social aspect of UGSs more than, much more than in MdG or Lakeside?
D: Because they're likely to socialize more in these spaces. So MdG, Muizenberg, we going to socialize, hey come on for supper, let's watch the rugby on TV, let's drink a beer, let's have a braai. There, you don't wanna do that: you wanna go walk in a park, you wanna chat with somebody. At least they can afford this. Or, it's too dangerous to come to my house at night or, so a lot of that is social, a lot of that is socializing, just go play with the kids, always play a

game, throw the ball around, kick some soccer, we chat afterwards. These guys, kids are doing that at formal sports. So I think that's what that is. It's
N: Lack of other space to meet with friends and family.
D: Yeah.
N: Yeah, I see.
D: And that's an important finding. And again, that's one of the reasons why you wanna make these places safe. Social spaces.
N: Yeah.
D: that makes sense to me. But, as I say. A lot of the line functions don't encounter, don't integrate the different activities.
N: Ehm, as in the .. you mean law enforcement?
D: Well, you got social development. If you look at open spaces. Open spaces fall under social development. Amenities if they're sports fields. Parks if they're parks. And nature reserves if they're nature reserves. But social amenities, parks, and amenities all fall under community. The nature reserves fall under transport. We're over here under transport and transport planning. If you figure that one out, tell me. 'cause yeah. So you can see why this is complete like .. So my colleagues in parks, who I know quite well. If I formally wanna do something, I need to go to the executive director up there. And this atmosphere, almost on the edge of the earth atmosphere. And then just talk to this other god-like king over there. And then it's never going to happen. So that's what .. There.. The disciplines doesn't make sense where they're clustered.
N: Yeah, so the whole hierarchy within the City doesn't make sense.
D: For this sort of thing, you rather want project teams. You rather want, okay, what is the objective, we wanna make open space, well you have different line functions working on a project discipline. And you give them the annual timing. City doesn't work like that.
N: City is also too far off from what's happening.
D: Yeah.
N: Yea, that's also a thing that I realized. I'm doing this internship at the City. I don't think that a lot of what is being done there is based on what is actually happening on the ground.
D: Wow. How long have you been here?
N: Eh three months.
D: And you can notice that already.
N: Wellll.
D: My goodness.
N: I'm doing research on LH among others, but the people at the City don't go in there. How do you make policy? I'm for science-based policy.
D: They are all out of touch. They don't want you to go in there for good reasons. It's quite a rough area.
N: I really appreciate it, they are really protective about me. No bad word about them whatsoever. My supervisor Joanne, she's fantastic.
D: So much decision-making is out of touch. They have no idea of the reality on the ground. Someone will complain about, I've got public toilets and they're broken, so I'm getting someone from on high and we fix this, I'll fix them. two hours later, my first door is stolen. I told you, but you're not here, so you can't see. So there's this disconnect between, well. And somewhere like that, sort of area would make far more sense to take different line functions, people you know, a project team, you give them their own budget, and you give them a deliverable. Have them setup this open space, and you do it on that basis, rather than to work in these disconnected silos that exist.
N: Ehmm .. So, with CTEET you focus especially on children. Why do you think it's important to especially get children to go to UGSs?
D: Didn't you hear the 1980s concert Children are our Future?
N: I was not alive yet.
D: It was a whole music concert. Children are our future. There's a song about that.
N: Yeah, probably I missed that.
D: Before your time. oh yes, that was a joke, but not a joke. Children are the future. And it's easier to start with that age ehm but the other thing going for you is that education links .. In eh, the natural environment is in the syllabus, so it links. So there's a linkage, as opposed to just trying to teach it to adults. And the other thing is that younger children are particularly younger ages, are wired to want to learn about the environment. So eh, like, early childhood development, … [??] so, for the first two, three years, you learn to walk and basic talk and mama, dada, you're getting across, basic cross[??], from about 3-8 years of age, your brain is wired to learn about plants and animals.
N: So that's the age where you have to
D: Yeah, so think of all kids of 3-8 years old, so and big business has learnt this long time ago, so why is Shrek .. why is his best friend a donkey? Because it's an animal. Why is all the modern cartoons, finding Nemo, a Shark's Tail, The Reef, et cetera, all about animals with adult humour? Because you double the audience. So all the kids are going: ahhh animals! No idea what's going on, but: it's an animal! It's a donkey! And the adults think, I mean, Shrek is probably one the more intelligent movies ever made.
N: I love Shrek
D: It's pure brilliant! But the point being is that between the age of 3-8, your brain is wired to learn about plants and animals. From 8 onwards, as you go into puberty, you are now socializing to figure out like, well, how .. because from 3-8 you need to learn, as a species you have to learn, what can I eat and what eats me? That's what you have to learn.

So your brain is wired. It's easy to teach. That age. Look, there's a bird! Wow! Look it's an animal! Wow! Teenager: hold on. You've lost that. Because they're socializing.
N: So what's those children .. nowadays .. they spend their whole days inside. What if you skip that whole part of being in contact with nature?
D: Okay, read the .. Read the papers on that .. I mean there's a whole lot of implications about what it does to you. And you heard [??] point of view of the most clever people .. [??] But the whole Nature Deficit Disorder is very real. You haven't heard of it? Nature deficit disorder?
N: No, I haven't heard of it.
D: Lookup something called nature deficit disorder. It's now a clinical term. So for example, if you're growing up at your very .. in your first year or so. As a kid, as a baby, you crawling around, and you only feeling one texture. You just crawl on the carpet all your life. It actually negatively affects the way you learn. Because you're not exposer to: oh wow, hot, sharp, soft, squishy, all those things. I mean, there's no .. you're just getting one. End up with ehm, you getting, you get locked in in it. It feeds autism. It feeds autism. My wife does .. my wife is a speech and hearing therapists for [??] kids, so she knows more about this than I do. But you start, you start getting autistic .. because there's not enough, there's not enough stimulation. And so to stimulate yourself, you end up doing repetitive things. Like banging your head against the wall. That's an extreme example. 'cause all you feel is carpet, carpet, carpet. Your brain is actually wired to feel: carpet, bark, sharp stones, wet surface. So nature deficit disorder is this whole thing about at the young early stages not being exposed to enough stimulation and tactile stimulation. So before you're gonna start talking and understand a conversation, you can touch something and think: okay, I remember that, that's a bark, that's a stone, and that's .. so tactile stimulation is one of the things that develops a whole lot of .. Because your brain is getting a touch. Through your neuro-system, your brain. Your brain is interpreting that. That piece of neurodevelopment gets used for other things. So hang on, I touch something, I understand this is a sharp stone. Now, I'm gonna figure out that when mother says that sound, it means something. It's all part of a learning process. so if you're not going to have none of that, then this is blab la blab la, because at that point your brain isn't activated. I don't know if I'm explaining it properly.
N: Yeah, no, I'll ..
D: Go look at that. There is serious implications around learning. And intelligence.
N: Okay.
D: Or how you put your intelligence into work. Ehm nature deficit disorder. It's quite a well-known thing. It's very well studied in other parts of the world. And then the other by-product is allergies. So more and more industrialized countries, pupils are suffering from more and more allergies. Because they're not being exposed to allergens. So you're getting these bizarre things like, in Europe the doctor will be giving you a chicken to put in your house for two weeks. So you breathe in feather mites, because you haven't been exposed to birds. Everything is too clean. So, put a chicken in your house and then don't hoover for two weeks. Breath in the feather mites and some dust, and it helps your immune system.
N: Yeah. Or play outside.
D: Yeah. Ehm .. There's those sort of bizarre things. And that's one of the [??] of nature deficit .. it can have health implications, and neurological implications. But the third implication, it has economic implications on a city. Eh I was trying to explain this to some of our councillors. In terms of funding education programs. I said, imagine I could teach one child in a hundred. Just 1% success rate not to drop litter in the street? What do you think that saves us in terms of blocked storm water drains? And litter on our tourist beaches? For example,.
N: Quite a lot. Because this child tells his friends not to litter.
D: Yeah, so I mean, even if I have a 1% success rate, you could probably measure it. So I think not being exposed to natural open spaces, and not having the opportunity to educate someone about the natural environment has, has negative economic expenses for the City. Saving water. Why should we save water? Water is water. Where does water come from? Ehm it has .. So I think it has negative social implications for the child's learning. Ehm, it has negative implications for the economics and it has negative implications forrrr .. What is the third one? The neuro-development of the child. So I mean, in those areas ehmm.. I think it's far bigger than people think. I think it's much bigger than people think. Humans come from, we come from the wild. Modern made cities are a new phenomenon. We only now discovering .. This is, we're not actually built for this sort of environment. So like, looking at a computer screen, psychologists will now tell you, looking at a computer screen .. part of the problem with a computer screen is, it doesn't change enough. Your brain is wired to walk through a forest and go: bird, leaf, tree, and particularly men who would defend a tribe. You would go: sable tooth tiger. You would totally focus on the sable tooth tiger, but you can only do that for so long. Before you start getting fatigue. And the problem with people, you actually wired, people's brain are wired to have lots of the like bits of input. So you walk through the forest and you see a bird, a leaf, a tree, and you're not wired to have this like, thing all the time where you are focussing on something, you intend to. And again, your chance, young development, is they sit in front of the TV, they're getting that, but they're only getting it in one form. They're not touching it, they're not smelling it, not hearing it. So you're in this room, autistic .. You only .. And it's from not having this sense-input. So now we're discovering things for example that like, fatigue working in front of a screen, it's because we're wired to be in nature. We're not wired to look at a screen. So I think there's a lot of things we're going to discover in the near future. We're gonna learn the hard way that screens are not natural. And if you, you exclude natural open space in cities, you are looking for trouble. 'cause humans are [??].
N: That's interesting.
D: There's this interesting National Geographic article about this. A year ago. On open spaces and why they're important. South Korea is doing a lot of work on this. Look up this national geographic article, probably a year ago. I've forgotten what it's called. it's got a major, big article on natural open spaces, nature deficit disorder. Korean

model. So like, in Korea, what they now are doing, like the local government will, like I heard nature park. They'll have nature guides there. But the nature guides are not there to say: oh this is a bird, tree. They're there to facilitate you to connect with nature. When I say connect, in a sense that like, yoh, this is a [??] [??] [??] people are so far disconnected, they're finding, and they're finding huge improvements in health. So this is how you sit quietly in nature, tree is not going to attack you, listen to the birds, that .. that's what they call a nature guide. Or nature facilitators, another term for it. Ehm and the whole department? does it.
N: It's interesting that we actually need those people to facilitate our contact with nature.
D: Yes, it's quite scary.
N: Yes, it is.
D: But that's [??]. They look at .. There was another article about .. 5 years ago, at the national proxies, the US, why less people are visiting the NPs. That's also a good article for you to read. Also National Geographic, it was some time ago, why, why visitor numbers in the NPs in the US is just dropping.
N: That's interesting, because the NPs in the US are beautiful! I wouldn't mind spending time there.
D: They are. But what they found, was two things, what the study came up with. One was that the price of fuel affected. It's not that people are spending [??]. a lot of people are trying to visit every NP. They found the price of fuel was affecting. So, [??], RV and driving was affected. The biggest factor they found was that they hit the generation that grew up in front of TV. They've hit the kids that are now adults who they just never did this with their folks. And they just don't do it. And they've hit that kind of bump of the TV generation. That's the biggest conclusion. It was quite significant. It creates a culture that feeds in on itself. And Korea is making active steps to break it, you know.
N: Yeah, that's good. I'm learning a lot about parenting today. Or how not to parent.
D: How not to parent.
N: Ehm, let's see. Yeah, oh, I have ehm, another question about conservation. So, obviously well, there is a reason why you put fences around those nature reserve. But on the other hand you want to educate people and bring them into the nature reserves. So what balance should there be between how frequently people could use those eh nature reserves and how ehm well you focus on biodiversity conservation. Because I guess that the more people go there, the .. maybe
D: That you determine by carrying capacity. But nature reserves .. If you just do it by nature reserves, nature reserves have two carrying capacities. One is the ecological carrying capacity and there is a social carrying capacity. Because you sometimes reach a point where there's too many people. And you don't reach your social objective or your emotional subjective, which is, you wanna be with nature, with some friends, and now there's 15 million people on the beach. What am I doing here? It's time to get back home. So, you determine that by carrying capacity. But I like to see this the different way around. So if you work for the City of CT, which is a municipality. All municipalities in the world work for one objective, and what is that? What do they do to the landscape?
N: Eh, plan it?
D: They change the landscape. For the benefit of what species?
N: Humans.
D: And even if we pa.. even if we make a park, it's for the benefit of humans. Certain plants will allow .. certain trees, we don't want those trees, there's enough shade, cutting the lawn. So we're changing the landscape, just for humans. And that's part of the problem. So the bulk, this is my theory, for what it's worth. The bulk of humans now live in the city, and what we keep telling people, is don't worry, we will change this plant, is there a bump in the way? We will flatten it up and we will put a road. Hard surface? Just get rid of the sand, make a hard surface. Naughty tree? Cut that tree down, let's plant a different tree. Don't you worry, this planet is here for us. And we psychologically reinforce it. I've tried to explain this to some of our councillors. That if you look at our, if you look at our mandate, so when you manage the nature reserve in the city area, you have to have very clear filters of what comes first, what comes second and what comes third. And that's because every single last piece of open space activity, especially if you've got poor planning, people want to do it in nature reserves. You name it, I've had an application to do it. Everything shirt of designing a nuclear weapon, I've had an application to do. Everything in my nature reserves. Because there's no other open space. So you better have some very strong guidelines of what comes thirds, second, first. And even when it comes to people, what some people can do and some people can't do, [??], who you're gonna give what rights to. And I've got things clear: biodiversity first, people and especially environmental education second, and tourism and recreation third. In that order. So If I have a conflict, that's my, that's the policy I follow. And to explain it to big councillors, I think it's infinitely important in a city, for the psychological wellbeing of the citizens, that you go somewhere where you're not first. So come into the nature reserve, you don't come first here. You're a par with nature. Sure, we'll make you a path. But that's it. You're an par with nature. The world doesn't evolve around you. Surprise! You can only use so much water a day .. We need that space! And it sounds quite philosophical, but it pins a problem when it comes to sustainability because every single citizen you have in the city, you're programming them to think: okay, don't worry, we will just keep changing everything to match our needs. It's not sustainable, it's not sustainable [??]
N: Yeah, I see what you mean.
D: And if you, again it's a bit like saying to somebody: okay, get in the bus and you drive over there to the natural space because this suburb, this is not even a suburb. If we do the same thing in the city: okay, well don't worry, somewhere outside of the city is a nature reserve. Somewhere over there. Nature is over there. Is false thinking. We have to start with, your garden, you neighbourhood, your litter, your waste, your sewage. You have to start there. So, I hope this make any sense.
N: Yeah, it does.

D: So how do you balance these? [??] what I think. Well, I think you can't put people first and that's intelligent. You cant' put people first. Not that people can't visit and not that people can't use it. Put from the philosophical you can't put people first, before nature. Because it's all about nature reserves, not parks. Not green open parks. Green open park is the other way around. You have a green open space that people can use. Ehm or you have a space where nature occurs. A nature reserve is a natural space that people visit. So the other way around. So, and you set carrying capacity is when you set limits of what people can and cant' do. You work from there.
N: Yeah, so you think that [interruption of someone from outside].
D: We are trying to catch a hippo.
N: Again? Or still?
D: Oh yes, I remembered you asked me a question
N: yeah, I think, oh yes. The thing I wanted to ask you. So you think that the fact that Zandvlei is still there and not developed because it serves a purpose for humans? Because you said the City works for humans and not really.
D: Yes. But Zandvlei is a bit different. Because Zandvlei is an estuary. And the only reason that it exists is that they couldn't build houses there, because it's water. There's very little natural space left around Zandvlei. Zandvlei was one of those accidental nature reserves. Let me call it that. There are some nature reserves in CT that were planned but CT is a classic example of how not to do conservation planning. I mean, you can write a book about it.
N: Sorry, what was that?
D: CT is a good example of how not to do conservation planning. From a biodiversity point of view, it is a disaster. The two greatest extinctions witnessed in the 20th century, are! The greatest extinctions that were documented in the 20th century, Lake Victoria, some clever person put a [??] perch in Lake Victoria. 200 species of fish, all eaten. By an [??] perch. And the lowlands of CT. plant extinctions.
N: The witch?
D: The lowlands of CT.
N: Really?
D: Yeah, they are the two greatest documented extinctions of the 20th century. That we now of. Yeah, right here in CT.
N: SJoe. Extinction of..
D: Plants. Mainly plants.
N: Fynbos?
D: Yeah, lowland fynbos. [??] strandveld of lowland fynbos. And the Cape Flats has lost 13 plants species alone. Just on their own. And another 100 are on the brink of extinction. And probably another, another 15 are extinct but they're in collections. They are extinct in the wild.
N: And many of them only grew here.
D: Only found on the lowlands of this part of the Cape Flats.
N: Is that because people started .. more and more people started moving in there an just?
D: Yeah and also a whole lot of other factors. Alien vegetation, [??] fires, draining of wetlands, all those wetlands have been drained. And then there's mass urbanization, before anyone even noticed. So Zandlvei is a good example. If you look, Zandvlei is [??]. there's developing against the one side of Zandlvei. It's all transformed and developed. Only the northern peace there's a natural stretch left. Otherwise, all of Zandlvei is, you know, developed. And the only reason why it's there, is because there's large wetland. They couldn't fill it in fast enough so. So it's more an accidental nature reserve. I wouldn't say it's a good example of planned nature.
N: Ah okay, I didn't know that. I thought it was ..
D: I mean, it functions naturally. And the estuary is incredibly important. I mean, 90% of our inshore fish stock comes out of that estuary. So there's a huge kind of economic benefits, for our fishing. But from a natural planning point of view, no. it's not a good example.
N: Ah, I see. Ehm so .. like, I'm thinking other ehmm areas that would've been developed but that they kept because of biodiversity value they have. That's not really a thing here in CT? I mean, obviously for example eh Table Mountain is not developed because you can't really build houses on it.
D: Yeah but TM, you can always see TM. Put a house on TM and there's gonna be complains because they see it. That's a landscape point of view. Cape Flats, you fill in entire wetlands and no one notices, because they don't even notice they exist. So, yeah. They're two different perspectives. Biodiversity is a very difficult one to sell, because a lot of people don't even understand the concept. Ehm so it's a difficult selling point to save a piece of land because its got some endemic plant on it.
N: yeah, only if you try to tell it in such a way that is has value for humans, then it's easier to sell.
D: Yeah. And I mean a lot of them don't have value. Direct economic value. Direct anything value. They can have a cultural value, but most people just don't care.
N: Yeah, that's what saved Prinsesvlei right? That it had a cultural value.
D: Yeah, I mean, yeah. You can say that, it's not the biodiversity network. You could say it's the cultural value. A lot of the natural stuff of Prinsesvlei has been destroyed. I mean the natural environment is quite degraded. Ehm yeah. But it's a difficult one to sell. Because people usually don't understand why we want to save a specific plant specie. And the longer they survive the more value they will get. People eventually will kind of [??].
N: Yeah, hopefully it's not too late by then.
D: We try, but yes.
N: Alright, I think ehh all my questions are answered.
[wrap up]
D: I mean, ignoring what I said. How many people rated safety as an issue?
N: Ehm you mean the survey or my interviews?

D: Everything.
N: I think that's
D: Is it going to come up as a: hello, city of cape town, you kinda wanna pay attention to this.
N: I think that's the biggest topic that has been discussed by anyone.
D: Yay! Yay! I mean I raise it. I sent a report saying: oh, this week I had this person murdered, that person murdered. Pff. Doesn't work.
N: Yeah, maybe at one point you get numb for it.
D: Yeah, but that doesn't mean it can't be done. The problem is huge, but that doesn't mean you cant' start in one place and say: secure this piece. We don't have that yet. As I said there's 0 law enforcement officers dedicated to the City's natures reserve and its 12% of the city's surface. It doesn't make sense. It doesn't make sense to you. And yet, you. Yet, at the same time the city is saying: here is these open spaces. Go forth and use them. it just doesn't', it doesn't talk to the reality on the ground.
N: Yeah, that's what not being seen. I hope that this research will contribute a bit to that. By increasing the understanding of what is actually happening. Ehm, yeah. We'll see.
[more wrap up]

Fadiah Abbas – Levana Primary Eco-school
21 June, 2017

[Introduction]

N: … Maybe you can now also shortly tell me what you do. I read a bit on the internet, but also for the recording.
F: Okay. Well, I am, my name is Fadiah Abbas, I've been teaching here at this school for over 30 years. The school is 40 years old. I was, I started teaching in 1978. So that's quite some time. You weren't born yet, haha. So ehm, yes and then I started to work in environmental education. I'm now currently I'm the deputy principal here at this school. But I started with environmental education some yeaaars ago. We work [?with a group of?] teachers. We started here in the area. Steenberg, Retreat, Lavender Hill area. And then we started with environmental class, we formed the, the Steenberg Teachers Environmental Forum. That's STEF, S-T-E-F. And then we started taking kids on camps, environmental camps, and environmental hikes. And that is where we started. And then obviously I started to empower myself as well. Attend different environmental workshops, like ehm eh recycling, biodiversity, ehm and eh quite a lot of eh all those environmental issues. And then I also did a course at eh Rhodes University. Also on environmental education. And I did some short courses with WESA. Eh water society and then ehm [??] city of Cape Town. And then we started with eh, that time it was the YES-program, the Youth Environmental School programme. And then we started with the eco-schools. That is where the eco-schools started. And Alice, that you, Alice Ashwell, she was the one who started the workshops with the teachers. And because of my passion, I started the environmental club here with the eco-schools. And then for 10 years I didn't get any support of any organizations. I had to find my feet by myself. I had to find ideas, see how to put it together et cetera, and into the school every year for those eco-schools eh competitions. And then our school was the first school that won the international eco-school flag. Me myself, and the principal and two kids would go down to KwaZulu-Natal, to receive the international flag. And we are still running the eco-school club here. And we've got quite a lot of ehm environmental activities happening here at school. We've got the ehm, we've got Earth Child here. I don't know if you have heard of Earth Child. Not the clothing, but heh Earth Child. They're running now, they do like yoga with the kids, we have worm eh, worm farming, which they do with the children. And ehm then ehm we had, but not anymore, Surf for Life, that started the community garden here at the school. But you too, I don't know what the problem was and they pulled out of it. And ehm .. That's basically what we've been doing now. So we're quite, we've been involved in quite a lot. And now we've started with the Prinsesvlei Forum. Where the learners now, I took .. A month ago, we took learners to Prinsesvlei, where they had the first eh activity, workshop, with the chil eh kids. Doing ehm, going back to the, no going to the future. 3017. Flying, coming back to 2017. What happened to our birds? Quite interesting and they enjoyed themselves. And then last week we went to do some planting there. To attract the birds again back to de Vlei. Because, I don't know if you've heard, they actually wanted to use that plot there for a mall.
N: Yeah, I heard.
F: So now because they won the case, and now they, the kids have been asked, they went now to plant some trees now.
N: That's good.
F: So that's basically in a nutshell that I can think of what we've been doing, what I've been involved with and, we've got other teachers also on board to assist with. Then we've got Arisa, green programme project here at school. But eh the parents are now currently running it. So the school will get now eh, get like some funding from that as well. Regarding the recycling, yes.
N: So, why did you eh start this eh, way back, this eh STEF-group?
F: The STEF-group. I suppose, we went on a camp. We went to eh Bredastop. This one specific teacher, he started, that was in the 1990s hey. He sought, called interesting teachers, who was interested in environmental education, to come there, we will have a camp. So we went to [??] in Bredastop. And there we started work eh, then there was this eh group of teachers from eh Elsiesriver. They ran, they facilitated the workshop. And I think there the passion started. Looking at environmental education and I think that is where my passion really started. And then I started, oh yes, I started eh a garden at the back in front of the science room. And then in the year 2000 we won a price for the garden. So that, I suppose, the passion started. And that is where I just reached out and I'm still passionate about it.
N: Yeah, and these hikes and camps that you organize, is that maybe for children or also..?
F: For the kids, no, the hikes and the eh and the camps, environmental camps is for the children. So what we normally do, but now the CTEET, I don't know if you heard of them. CTEET, they ..
N: Yeah, I went there.
F: They are now the, the project, the camps. But we used to run it by ourselves. Then we would book a place in eh, in eh there is sunbird and there's, that's in Noordhoek, and then there was another place where we used to, in Glencairn. But then we ran our own project. Because of, then we would run our weekend projects now. To fit in with the children. So I suppose, that was all part, you see, LH as you've heard or read, we try to show the children, there's another life outside. There they are out in the nature. And oh yes, we also went to Bredastop one year. I was involved, I was the LEE-teacher in environmental education. With the department. And then we could take learners to ehm Bredastop, which was fully funded by the lotto that time. also very passionate guy from the department, he retired now, two years ago. And we could take our kids there, and there we had environmental .. They did like, we covered like everything, from biodiversity, starting by rivers, looking at .. Oh yes, and I was also involved in a project with invasive alien plants, and because of the workshop that I attended, we could go to these camps with learners. And eh,

but now CTEET, they are now basically running everything now, so the teachers take .. And then they run the project. But we used to do it at that time when I was involved in the environmental education eh projects.
N: And why do you think it's important to show the children that there's, what it's like to go into nature, and to interact with nature?
F: Yes, looking at here, the pollution and sounds and all this, going into nature I show them the difference. How, they don't need to be afraid. Here it's because of gang violence and all that. But going into nature and to interact with nature, it's a different perception for them. they could really see, but this is a different life. And this is what they enjoy. Because I also got eh an email from another lady that she wants to come in from Prinsesvlei also to do eh a project on eh nature and ehm humans nah. Something like that. So for them I think, for them, they don't just, it's about doing something in nature. Like last week, look at the planting. Because they now really see how to plant, what to do, and they learned, at the same time they've learned about the plants that they planted. You know? And the importance of these trees. That it's not just to break down. But especially looking at birds coming back. And because also I teach natural sciences, I teach now for grade 4, 5, 6 and 7 natural sciences. And now they can see, because ehm we do it, it's part of our curriculum. And that is practical. So now they can see how … …
N: See what they've learned
F: Yeah, what they've learned. You see, so that is a way of teaching them also. Or learning, it's taking place at the same time. because last week, when they went to Prinsesvlei, they could plant the trees. But the name of each one had to take of the name of the, the tree was on a poster. And then they had to write the name on the stick, which with they planted it. But at the same time they've learned about that tree. And then they gave them ehm, they gave them eh worksheets, which they would collect. Which they have to complete. And they have to collect. So they've learned about that. And the importance of that tree and, especially for birds coming back. Just see that. Save the birds. They did that.
N: That's cool. So why is it important that they understand the importance of the trees and the birds and, why do you think they should learn about this?
F: Ehm, you see because we as humans, that's what I tell them. we, we need .. How can I put this? It's because, if we look at medicinal plants. They can grow it, on the back, in their back yards. Because some of our parents do have eh a back yard gardening. So they can grow it, and because, looking at medicinal values of those plants, and most of this fynbos has medicinal values. And that's why it's important for them. and especially looking at, if I look at the grade 7 curriculum, and even the grade 5's, because I've noticed that the grade 5 and 7 curriculum links with pollination, fertilization. So they can see the importance we see now really with the drought that's happening here in South Africa, or in Cape Town, Western Cape, looking at the drought for example, so now they can see the importance of, of these birds and insects, and I'm also eh in the grade 7 ehm curriculum, we speak about the importance of the insects for example. The bees. And I show them how they are depending, these farmers are depending, the bee farmers are depending on the tree, on the apple, say for example the apple trees or whatever, apple farmer. So what happens now recently, was, where the apple farmers are got hold of the bee farmers to bring their bees for pollination. So I show them and I speak to them about that. The importance. Because one depends on the other one. So that is important. And just to make them realize the importance of these eh, about nature. And about us. The importance, how, what do we, what role do we play in it. So they, the kids they seem to, and I suppose because of the passion of teacher, they would be able, and Alice, when she came here, she did eh identification of birds. And the kids could, she could, she showed them the difference in height and wait and all that. And she showed them eh their habitats. Where do they, and their food for example. What they eat. And eh so how can they identify them. and even the sounds. Bird sounds. And they enjoyed the lessons. Because they can present and say whatever bird. And I think the interactions for me, that is important. Even here, and let me tell you, here. Us again. We've got children that's academically challenged. Can't read and can't write. But they're good with their hand skills. So what I used to do is, then I take them and I ask, go work in the garden. And they love it. Because they would come and say miss, we wanna go work in the garden again. Because they keep themselves busy and at the same time they learn about, again because of the drought, watering. They know they have to go and water the plants. They know why. We look at weather, climate change, also the importance of that. So everything links. Everything links. Us, if we look at the biodiversity itself, we look at, we look at biodiversity. We see us. Can't do without it. That's important. So we need to look at the importance, the roles that we as, as humans play for example.
N: Eh do you think that the parents eh actively choose the children to go to this school because it's an eco-school?
F: Well, let me tell you ehm, in most cases the parents here, they were students here.
N: Ahh, I see.
F: They were students here. That's why. And some parents, you know. Sometimes I still meet some ex-pupils and then they still ask: miss, do you still take the kids out on a camp? Miss, do you still do the recycling? I can remember we used to have to collect the bottles at the classes. Oh miss, even the high-school. They come and say miss: can we go on a camp if you go to camp again? Things like that. Because they're out in nature. It's a different life for them. it's a different experience for them. you see? So I won't say it's because parents .. I suppose because they know the school and they know some of the teachers. Some of us has been here years. So they know .. I mean, everywhere there's challenges. But it depends on you as the person how you eh eh ehm .. Communicate with eh .. With parents and the children.
N: Yeah.
F: So ehm, it's not just because of the eco-schools. But I suppose, it's the passion. It's passion. And even we take children out on do ehm environmental education ehm outings. Like ehm now recently the grade 3s went to ehm, to ehm aquarium. And then the grade 5s also went to the aquarium. So, again, it's a case of, we used to get the aquarium here at the school. But eh eh, somehow, I don't know, the funding dried up or something. But ehm I suppose the

parents have their own choices. But also, it's now, but some parent they started their gardening. Because where parents from [??] where they worked as partners of Surf for Life. Because, I remember there was one specific parent, she then, she said the children, she taught them as well. The girls, the girls had now grade 7. And they love working in their gardens at home. The back garden. Back yard gardens. So ehm, I don't know. I won't say it's because of the eco-school. I suppose, because it's their preference.
N: Yeah, I see. I have, I wanted to show you some results of my survey and ask you why you think it is like this. Ehm, so this graph shows how often people from the various neighbourhoods go to green spaces. UGS stands for urban green space. And you see that people from Marina da Gama, well they go almost daily. And especially people in LH don't go often. Why do you think the difference is so big?
F: Let me tell you, socio-economic problems here in LH. For them, it's not a necessity to go to parks. Because they don't really have money to take their kids out. So that is why we as as the school, we would take the learners out. As I said to camps, or environmental education outing. Then in most cases because they live on ends-meets. So it's not for them it's not important. Because there's not, because in most cases some of those parents have more than five children. So they can't afford to take those children out. You see? So that's, it's because the socio-economic problems here. So for them it's not an issue to take the kids out. Whereas you and I would say, okay, no, we would like to be out in nature. But for them it's, the child .. It's fine if they play outside. Yeah, so they won't really go. Unless, it might just be in summertime, they might just go to the beach. That's the only time. in summer time. but again, parents might not take them. the kids walk on their own. In most cases they walk on their own. They walk down here, Prince George Drive. They go to the beach. In most cases. Because parents, I don't think they've got any priorities as such. Because they, they feel, in most cases, some of them here sit and they have a party, you know. They worry about their drinking buddies. But not, that's not important for them.
N: Okay. Ehm, you mentioned that you want to show the children how important the environment is. I also asked people the question ehm what functions of UGSs people find most important. Eh and there were five categories. This is the figure. Eh so we have cultural and aesthetics, economic, environmental, health and wellbeing and social and educational. And ehm, in the yeah more wealthy neighbourhoods, people find the environmental aspect of green spaces more important, but if we look at LH for example, we see that social and then also economic. Why do you think that ehm in LH the social aspect of UGSs is more important?
F: The social space?
N: So, it means for example, ehm that it's a space to meet with friends and family, that it's a space to meet new people, that it's a space to learn about nature, ehm and it is ..
F: But what you have here for LH less.
N: Yeah, so people find the social aspect more important, so meeting with friends et cetera.
F: Yes, I think it's, as I've said to you, because it's all about ehm priorities again. They won't take their kids out. They prefer visiting. Because they know each other's business more here than anything else. If something happens, everyone is there. So eh ehm, they, to me, there's nothing, they don't take the kids to movies. It might be, but it might just be 1 or 2 percent. Again it's about eh ehm eh the, the eh cost involved. So they won't take their kids out like that. So ehm for them it's just school, we've got a mod-centre here. Mod is eh, sports and cultural. After school. So when the kids here from one-hour clock, the parents say, okay they can stay here till three-hour clock. Normally until five, because of safety. So we, dismiss at three. So this is where the children play. Our children don't know how to play. They really don't know what play is. Not like when I grew up playing skipping ropes and all that. These kids don't. but now recently we started the skipping rope when they were into competitions. Because for them, play is running and kicking and, and, and jumping and going on like that. Hitting each other. There's nothing really. Because this is their life. The, the fighting, the social visiting. Worrying about what's happening next door. See where was another gang shooting. That is for them more important. Education some well, some eh care for their children's education. Other don't. because we can see the support that we get, even from the parents. Some cases, because of the socio-economic problems. And because now the gang getting the youngsters involved. That is the sad part of it. Is the fact that parents don't know what to do. And these gang leaders, they support these parents. These gang leaders. They give them. They give them. And that is why these children really .. Two years ago I discovered a grade 1 boy was a runner for the gang leader. That is too .. Tic. Stuff. Because he really didn't know what it was. He just had money. We discovered he had money every day. Money. He was grade 1, he is now grade 3.
N: How old are you when you are grade 1?
F: He's was about 6, say 7 years old. So they called him, and then he must take. And then obviously he gets money. And then I asked, but I didn't know what was in the package or whatever. And he said, no sometimes they send me. But I knew the gang leader. You see? Because when he mentioned the gang leader's name, I knew, okay. So that means he's working for him. And then he also told me: no my mommy is .. the ma is on tic. If his grandmother needs bread or money, then he would go and ask this guy for money. So that is the, this is their life here in LH. And this is so sad. Because they don't go out. These children don't know where Cape Town is or Table Mountain. Unless we don't take them out. But take them on a hike. Next week, we will take eh this eh group of 13 children on a night walk, night hike with Earth Child. Two of our children is eh participating in the western province of [??]. So there is .. So if it's not for the school, nothing is happening in the community. You see? It's because the school, this is where the children come. And this is where .. That is why I feel it's important to show these children that there's another world outside. Because here, if they finish grade 7, I don't see all of them. 1 or 2, then they go, and they have babies. Baby grow up, because mommy now didn't go to school. So baby .. In 7 years time, baby will come to school. It's a circle. A vicious circle. It goes on and on. And because it's that he's from LH, he's on its own here. So it's a case of, you just go and continue what you do here. Because some of these children have great dreams. We have cases where, we had the principal next door. At Hillwood Primary. He was a student at our school. He attended school here. He lived here in

LH. But he made something out of his life. And two years ago we had a boy, also from LH, he was a pilot. But he was killed in an accident. The pilot. He was in eh Pretoria.
N: A flight accident?
F: Yes, a flight accident. So we have quite a few teachers that came out of LH. You see? We still have another teacher here. She was also a pupil here at school. So we've got good things also happening here in LH. It's all about how you motivate these children and what they want out of life. And have a dream. That to me is important. It might come true, it might not come true. The other day we had this, one of the naughty boys here, from grade 5. And I said to him: what would you like to be one day. No, he's now grade 7. Big boy. He was, he, they formed a clique. Almost like a gang. So it was now an outside fight, where the two gangs sort of met and they wanted to fight. So this parent brought the one, because the one boy was next to it. And the other were next to it. Then ehm, I asked him, what do you want to be one day. And he said to me he wants to be a doctor. So I said to him now why? I don't see yourself being a gangster. This is not the life you want. And his mother, then when he came, and his mother came here, that's what he said. We don't want this life for you there outside. You see how, there's now 15, 16, 17-year old's here, there's been shot. Or running with a gun. So there's good things also happening in LH. It might not be a lot, but we try. We really try to show them, there's another life outside.
N: Yeah, so when you say, you want the children outside. Do you think ehm it's not very useful to focus on upgrading the green spaces inside LH? To show them here inside LH what nature is like, or do you think, no we really need to take them out?
F: No, out. We need to take them out.
N: Why do you want to take them out?
F: Take them out of LH. Because of, as I've said, the situation that they're in. if you have to drive here through weekends or even during the holidays. They're standing around. There's nothing for these children to do. Okay, there, there won't be a problem having something here. A park here, because maybe we need something like that for the kids as well. Because, we have a big open space here, currently it's been used for soccer. For soccer, here. But ehm, if there's a nice park. If you look at the urban park in Green Point. I mean, I'm sure they, because children need to play. That is part of their development as well. Especially our little ones. So, I mean even if it's in LH, I don't see a problem not to have it, something like this here. But we might also get those who's breaking down. Because they don't really know the value of things. Most times, these children don't know what's the value. Like, I was driving, I went to get [??] stuff this morning. So one of these, we've got a security, we call him Bram Banani. And eh she said eh, she had to go check if her salary was paid, so she went with me. So I said, take your phone, because it will go on your phone. She said, no, her son took her phone. I mean, hello? I said, but you need the phone more than the son do. And he is at high school here next to. So he said, mama get me … So you see the parent's perception. I'll get me a small cheap phone. So she now just allowed him to take her phone. She's without a phone. So that's again about the needs and wants. It's a case of, I want, because that one has. And the priorities, again, I'm coming .. You know we are a no-fee school. It means they don't pay school fees. Our children don't pay. We applied and the children do not pay. But sometimes we have what we call a casual day. Where they can wear casual. Every end or beginning of the month. Then you must see. Then they dress better then what you and I are dressed. Because they want that Nikes, and they want that. [??] But your mother don't even have money, but you .. Because parents will do that. So that's again the priorities of parents. Because they, because now they believe, I want to give my children what I didn't get. It's not like, it doesn't work like that. So coming back to the social, I suppose, there's not much space here. Because we've got quite a lot of people. I think they put up these shack everywhere .. Two shacks burned down yesterday. Two of our .. Two families, shacks burned down. And I think they come and they just put up shacks. So there's not much space here. I must really look, if you must really drive through here, there's not much. Especially, we've got different areas, we've got Montagu, this is LH, then we have Capricorn on that side, we have Hillview, we have ehmm Military Heights. So if you drive through there you don't see any space, because every space has been taken.
N: Yeah. But here around LH itself there's a lot of undeveloped open space right? It's by choice.
F: Yeah, undeveloped. Nothing is there. Maybe they can, yeah. I mean, I'm sure people … But ehm, looking at the ehm, as you said social, I think that is why that gives you the idea of how things really are here in LH.
N: Because also, I asked this, if there should be more green spaces here in Cape Town. I asked it because, also, here, this figure, that eh how far people have to travel. These graphs are all eh, the distance in km's. how far people travel to go to UGSs. And you see that, okay, here's for example, based on income. So, the poor people have to travel furthest, while the very rich people, they travel very little to go into green spaces. So, these people already have the least, and then they also have to spend most time and most money to get somewhere where they want to be. Here you also see ehm, for ex., in LH people travel further than people in Marina da Gama. Here you see it as well. So yeah.
F: Yeah, in most cases they have to travel by train. Now, you must think. Transport, from here, they have to take a taxi, to Retreat Station. Then from Retreat Station, they travel, if they have to go to town right. So say for example they want to go to Green Point Park, okay? So they travel to Cape Town station, then they need to take a bus again, I think, to go to Green Point. So if you look at that now, they have three or four children, they won't go. Because they can't afford to go.
N: Yeah, also, I don't think I brought the figure but I also found that the more children people have, the less often they go.
F: Yeah. They can't afford it. That's why I said, they don't take their kids anywhere. We now participated in a eh gross moth signs?? We participated in [??] the language, the spelling. And it, our won. Our school won. We had three children. They became first prize for their spelling. The [??]. and then we participated in science. It was the first time for science. And we became like 6th in the science. This year, well, we didn't make it for the spelling or the maths, but we went through to the semi-finals for the science. We, our project is an ehm, water purification system, so eh the

semi-finals is now in August. So we hope we will be able to go through to the finals. Then, eleven schools were selected. So we'll see if we made it for the finals.
N: But something like that is very motivating right, for the children?
F: Yes! And, I mean, they are looking forward to it. And we've got like one grade 5 boy. And a grade 6 boy, and a grade 6 eh eh eh girl. So we will see. And it's, it's for them, it's eh, they actually enjoyed it. They were a bit nervous and all that. But they enjoyed it. It's something different.
N: And then they also to get the opportunity to go outside again. So ehm yeah, we just eh quickly talked about eh that there's not enough space eh, I asked people the question: do you think that UGSs occupy space that would be more useful for buildings and housing. So basically, should we get rid of our green spaces, and instead of the green spaces build houses. And then again you see that people in LH largely agree. They say yes. People in the more green areas, they say no.
F: Yeah, because, you can see, because of the area and because of the more .. Well LH here, because as I've just said, if you have to drive through here, Montagu, Hillview, there are people in shacks as I've said. This area was now build. Rondevlei. So the people that lived in shacks here, they build houses for these people, so they have been .. Some of these people will move to pelican park. There they build a new scheme as well. Yes, but eh, there's still a lot of people here in the back that lives in shacks. And those people will obviously, because if you look at the shacks alone, they share eh eh taps, they don't have taps inside. And eh, well this incident that happened yesterday, there were shacks that burned. And eh when I spoke to the father this morning, he said to me: he sounded like, also like an ehm a foreigner. Some African state. And, you know, that's the other things. Most foreigners coming in here and they are married. These people here. So they don't have anything. They don't have a number of the list or whatever. On the council list, you see. So they just put up shacks. Or they are living in back .. in people's back yards as well. So, and then he told me that, well, they had electricity which would then mean they had a number. But I don't know whether they get houses. Because they said they had an electrical box. He said it was faulty. And they contacted the council, but they never came out to come and fix it. So the little boy, grade 2, he's about 8. 8 years old or 9. He lit a candle. He was looking for his school shoes. And he lifted in the room, but it went to the lounge. So the candle fell over. And both their shack and the shack, half of the shack next door burned down. So that's why I think, especially if you look at the area here. Have you driven down Military Road?
N: Yeah, I've been to Village Heights.
F: Yeah. Ah yes, you see. So there's a lot. So these people obviously say, give us houses. We don't care about UGS. they don't care. They wont. Unfortunately, it is like that.
N: ehm, let me see. I have a few more questions. But I think most of them ..
F: Because I speak about a lot of things.
N: Yeah, like, I have a lot of questions, but most of the time the questions already get answered in the conversation.
F: haha.
N: So, oh yeah. This is interesting. So, what I also found is that, I also ask people ehm their ethnicity, I did some online interviews, and then I did some face-to-face and people also filled out if they were black African, coloured or white. And then I saw that there's a big difference also between people .. So the coloured people they have to travel the furthest to get to UGS, much more than black African and white people. And I started thinking, why could that be? Ehm, do you think that there's some connection between where people live and how they are, how they get access to UGS, and maybe eh apartheid history? Because they live in certain areas?
F: Let me come in there. Yes. Have you heard of the District 6?
N: Yes.
F: I was born in D6, okay? We were all born in D6, and because of Group Areas Act then, that was years, we were forced out of the, of D6. Lots of people, I can remember, my granny, she was also born there, in that house. Everything was there. We didn't need to travel. Right? Everything. We lived opposite of mosque. We lived down the road of CBD. Where we did our shopping. We weren't far from the Company Gardens. So everything was near. We didn't know what was a train or a bus. Because we didn't travel. We never travelled like that. My father, he was a hawker. Sold eh green veggies. Vegetables. And fruit. He had a bakkie. Then we would use to come, in those years, we couldn't go to any specific beaches, couldn't go into specific busses or train coaches. So he had a bakkie and he would come and bring us here to Calk Bay. He. Then we would always say, when we get in the bakkie: johhh this is far to travel! Because we didn't know this. As children, we didn't know this. Any case. Then, we were removed, we came to live in Lavender Hill. We lived in that side of Military Road. The flats were all already built for us, as they say coloureds. Not just LH. It was LH, it was Hanover Park and it was Mannenburg, and it was Heideveld. Mitchell's Plain only came afterwards. So then they moved the coloured to these eh spots. Because we couldn't afford to buy a house. My father, my mother was a factory worker. We couldn't afford a house. So we were places in a flat here. I was still at school. I was still at high school. Travelled from here, I had to travel back to town. Because we moved March, April I think. So I was still at this school in town. So then I started to learn about travelling. Train. Had to get up early in the morning to travel to town. To go to school. The following year, I came to school here. I attended school here. So we lived in the flats. All those people that lived in the flat all came from D6. All of us. Here also. Right? Some of them, I don't know, but most of them, but I know, the area where we were, there's not a lot of flats on that side, there by Military Road. So we, all those people lived there. Any case, then it started to get a bit .. Because now of, not gangsters, but you know eh the rough ones. Then my father, we moved out and we bought a house in Military Road. Seawinds. So we lived there. So then people, yes, so then people moved out to Mitchells Plain. Then Mitchells Plain was established. So the people from those flats moved to much further again, hey? So the people in Mitchell's Plain, people moved to Mitchells Plain. We were in Seawinds. And then, you know, then you get all the other rough ones moved into the flat. And then it started to get a bit not so nice anymore. And, well then I started teaching already. So I came in and started teaching.

Eh then we moved and I bought a house on [??] Ottery. But ehm, coming back, because of the transport, it's too far to travel in. even now, I'm in Ottery. I mean, I am mobile, I have my own transport. I don't go to Cape Town to do shopping. Because it's, not too far for me, but 15 minutes going, but I rather go to the nearest malls. Kenilworth Centre, to go eh I've got the Ottery Hypermarket. So I prefer going there. It's nearer. Why driving and going so far. So I suppose that is why people don't want to travel that far either. And because then this became as we say coloureds, as you look at it now. But then in Capricorn, we have Eastern Capers, blacks. They came from Eastern Cape. And most of them are there in Capricorn. And then we also have the ehm foreigners. So they, but I always say this to the children, and I always speak to them. I say to them: you are lazy. You people don't want to come to school. You didn't go, come late to school, or you don't feel like getting up in the morning. But then you are the ones who would sit on the corner in the sun, say, there's no work for you. Why? Because you didn't attend school. You don't have any education. Then you want to turn around and say: why do the blacks get it? Because they are prepared to go to school. And admit, we don't have such a lot of blacks here at school. Next-door does. But you can see, the cultures are different. You can admit, you know what? Because the blacks are, for me, are more humble culture. Then the coloureds here.
N: Yeah?
F: They are rude. They expect you to do things. Blacks, what do we have here? That I can say. So I'm not racist or anything, but this is my eh .. So coming back to.. What did we talk about?
N: That I found out that coloured people travel much further for green space than black people and white people.
F: Because now that, because they were put here. They won't go to .. And, they might just go to Blue Route Mall. There is the Blue Route Mall here where they might go. Some might not. They go to the nearest shop. The Shoprite in Military Road. The other shops here in Rereat Road. Because again, it comes down to having money for transport. You know we have cases here. The nearest children's hospital is the Red Cross Hospital that's in Rondebosch. Sometimes they come here, then the child has an appointment to go to Rondebosch. Then they come here and they say they don't have money to take the child. I would call them and say: so and so and so. But must the child .. They can't go because they don't have money to take the child. Because again it's transport. If you look at how must they travel. I don't even know you travel. But I suppose it's two taxi's that you have to take to travel to this places, so that is why they won't travel to go to urban spaces as you've said. For them it's not important. They won't take their kids out, because there's no money. You can find here: you can just play outside, I just want to see you. And we had a case now recently, one of our pupils, a grade 6 pupil was killed and murdered here. Be ehm ehm, she was eh a really nice girl. Disappeared.
N: Yeah, I've heard about it.
F: Yeah, Renee. Renee Roman. She disappeared and then found. In most of these cases, in the community. You see, parents is, they won't, I mean they wont take their kids to these places. As I said, it might just be one or two. One day I was at a park, [??] one weekend. I was swimming. I just heard one of the children, hello miss! I was so shocked. Because you don't expect them to go. But as I said, there might be some of them with parents or aunties or uncles or whatever, will take them out. Or some of them, they don't want to be here during the holidays. Then their parents send them to family out of LH. But eh they won't go. These parents won't take their kids anywhere. Because as I said, there's too many of them.
N: So, do you think that these children that you take outside to see eh yeah, how nice it is to be in nature. Do you think those children are more likely to go into green spaces when they grow up and they will take their children too?
F: Yeah, we hope so, at least. We hope so.
N: I think so. I definitely think so. Ehm I think I'm pretty much done. Oh yeah, one last simple question. So, about safety. Do you think that eh if you want to have children safely playing eh in LH, do you think it would help to develop some good quality UGS and then put a fence around it? Or do you think that's against the whole idea of being in a public space?
F: No, I think these children, as I've said, they need to play. They need to play. Play is important. It also helps, especially the little ones, with their moto skills. And having something like that, I think they would enjoy it. They would enjoy it. Because if we have here with the Mod, you can see they enjoy playing here. They play with the ball, they ehm, they skipping rope, they play eh with a, they've got different activities here going on. And I can see they enjoy it. Not just because they get a meal, also, but they, it's playtime for them. most cases if they go, because of safety now, they are forced to stay indoors. They can't go out. They will .. Parents make sure that the TV is on and they play there, so that they can watch the kids. Because now with this gang violence in the area, they don't want their kids out. Because of their safety. But if they must really have something, and I think they will enjoy it. Because these children, they love playing. You can see. They love it. It is just, as I have said, because of circumstances in LH now, they are not allowed to be outside. Because of the safety and parents are more cautious now also. And I supposed they will freak out. If some parents come fetch their children at school. Then walk them home. Some will go, some eh will attend eh madrassa classes, the Muslim children. They will go after. Parents will go take them and go fetch them. so you can't blame them. you know? Because of their safety. But if they must have a .. And I'm sure. That's what I do. The grandchildren, I take them. there is a park not far from where I am. The gym park. You know where they, like the Green Point Park, where they do, where they have those exercises there. There's one not far from me. Then I would go and take my book. Take the grandchildren and then they play. Because that's what they like to do and to be outside. They want to be outside. Because they don't .. Sit inside all day on tablets and stuff. Okay, the parents are working. They take them on a Sunday. They will take them out to Green Point Park. They do roller blading and all that on a Sunday. But they like to be by me, because I have a big property and a tree. And they could play in that tree and play there, because they want to be outside and it's safe. It's safe. But because at home, mommy comes home at 7 o clock. There's not much time to play, and on a Saturday and Sunday, there's not much left because mommy still have to see to her washing. But I take them. every holiday. Now, there's like 6, 7 grandchildren. And actually, it's my

brother's. I don't have kids. So, but I, I'm like their grandmother you know. And I'm on holiday. Like, last time, we took them at Green Point. With 6. Not the baby, I didn't take the baby. The six of them, seven, my niece, she's also a teacher, cause we are at home. And she has two kids also at school. And we ended up at eh the train park in Green Point. Now the train park, I don't know if you've been there. The train park, you pay entrance fee, but you get like one train ride. And there is like different, there's what you call that? A zip line. And they got the rock climbing and all that. And they enjoyed themselves! After they said, they are hungry, now they wanna eat.
N: Haha, that's good. Then you know they had fun.
F: Yeah, that's why I say. They must have something like that. And I'm sure the mother will go and sit there with the children. They would go there and they would go and sit there. Because now, they can watch their kids and they can sit. And it's open, it's out. It's out. It's not indoors. Not so cramped up. Because in most cases here, there's more than one family living in the house. You see? And everything is like, they sleep together. Everyone. So for them, outside it's a .. You can see. You can hear them here outside. Because it's the little ones now playing here at the Mod centre. So I think that is important for them. especially now during the holidays, there's not much happening outside either. Except sitting in the sun.
N: Yeah, and if you don't have anything to do, to get in trouble.
F: Yeah.
N: But it's a difficult situation.
F: Yeah. We can just hope and pray for these children. That one day .. And sometimes you get, you get children, even they are working at the mall. They will still come and greet me. And then you feel surprised, because at least they still know you. But as I've said, some good is also coming out of that in the end. To me, that's important. If you make the difference, even if it's one.
N: Then it's already worth it.
F: You know, it's sort of the starfish. If it's just one, you make a difference in ones life. To me that's important.
N: Yeah, I see. Ehm, I think I'm through all my questions.

[End]

Stephen Granger, Environmental Management Department, City of Cape Town
22 June, 2017

[Intro]

N: So ehm, first I would like to ehm, actually first a very general question I have. Ehm what do you think right now are the biggest issues concerning people's UGS attitudes in CT?
S: I would say safety is, is a big one. Or perception of safety. Ehm I think that's probably the single most factor which inhibits people from spending more time in open space. And if I can say crime and grime, because they often go together. So if you get to places and it's full of litter and pollution and graffiti, usually that's a dodgy area. And there'll be some common electivity as well. And, immediately the perception will be that this is a dangerous place. And people won't go there as a result of that. Ehm the reverse side is that if you, if an area is, is clean and well maintained, the grass is cut, and there's no litter, there's no graffiti, generally there is a perception more of safety. And as people start to use an area, it becomes a self-fulfilling prophecy. So more and more people will go there. Access it. And some of those favourite places that you put up there, they were all places where if you go to, you'll see other people there. The people go to places because there are other people. People avoid green open spaces ehm, I think, ehm, in Cape Town because perception is that they're not safe. So safety and then also the grime side is the pollution. So if they're not maintained and if they're polluted, they're probably places that you don't want to go to if you want to enjoy green open space. You might, you're talking about Johannesburg, it's slightly on the edge of dodgy, and there can be an attractiveness in that. But that's an urban scape. It's not a space where you wanna go and breath the fresh air and enjoy the landscapes. They are the two biggest issues I think. Safety and pollution. I think.
N: Yeah. Ehm, so ehm I showed this figure also in the presentation, that especially people in Marina da Gama visit green spaces very often and people in LH especially visit green spaces very little. Why do you think that the difference is so big?
S: Yeah, I think there are different levels to that. I think the fact that ehm there are open spaces in Marina da Gama that are well maintained and clean, and perceived to be safe. Whereas I don't think those spaces exist really in LH. Ehm, so if people are going to regularly, on a daily basis, to a green open space, that would have to be close to where they live. If it was maybe once a week, once every two weeks for an outing, they would go outside that. So that wouldn't be affected. But the number of times they access it, means the place is close to them. and I would suspect the quality of the open space in MdG versus LH is very different. Now, that can be a factor of two things. It can be a factor of the local government maintaining it, but also the community looking after it. But there's a close connection between the two. And ehm, we have to, you have to then start asking, well why does a community in LH not look after their open space. Why would they be more inclined to litter, leave things around than those people in MdG? And then there are all sorts of reasons for that. But the two go together and arguably the City needs to do more to make sure there are quality green open spaces in places of poverty and such in Cape Town.
N: So what do you think are those reasons that people don't take care of their green spaces as well in LH as they do in MdG?
S: I think it's because of, we talk about in your DNA, if you grow up and you've gone to Wynberg Park and you've spent time and you enjoyed these open spaces, as opposed to growing up maybe in an informal settlement in the shanty town where life is tough and that's your experience. Ehm there's that famous quote by ehm Ghanaian [??] philosopher Baba Diam [??] it says that you'll only conserve things that you understand. You only understand things that you've been thought. No wait, you'll only conserve things that you love, you'll only love things that you understand, and you only understand things that you've been taught. So in other words, you grow up understanding them, and understanding, understanding them means also appreciating the benefits that you can get out of life, through that. It's a bit like, you know, not everyone ehm enjoys a healthy lifestyle with lots of exercise because they don't like exercise. But if they did it, they would find: wow, this is much better. So it's not part of their DNA. It's not part of their heritage. And I think that's one reason. It's also another reason. We've, the pre-amble that we have before. I'm talking about the apartheid legacy, is still very much the case. And although we are 24 years past democracy, CT is still very much an apartheid city. And under apartheid there was the feeling that anything outside, if you a disenfranchised citizen, you would look after your house. And if you went into shacks or houses in black areas, they would be really neat and well-kept. Probably much better than ours. But outside in the road, it would .. And their parks, their open spaces, they would be trashed. And it was almost a deliberate protest. Saying: well, this isn't ours. You foisted this on us. We haven't been part of that process of developing parks. And I remember one stage, the apartheid government developed what they developed peace parks. And they invested a lot of money in building these, kind of wonderful parks in places like Soweto and Gugulethu and a bunch of other. And I think they were indigned [??] and surprised when the local people rejected them. and they broke down the parks, and they broke the benches and the fences and they trashed them. and that, that was an expression of saying: well, you're doing this, you're foisting this on us. We're not being part of it. And that's very different now of course. Because people are all franchised. But, the legacy of that is still part of the DNA. It's still part of their thinking, that maybe this is still .. We're living in an apartheid settlement. Or we're living in a less ehm fancy suburb. Not as leafy. We don't feel that this is really ours. Maybe their families were forced out, they were living in District 6 or Newlands or Wynberg or Kenilworth as many families were. And they were all forced out, to live in other areas. They say: no, we don't, we don't wanna look after this area, because our land is really in Constantia or Kenilworth. This is where we used to live. So those are some of the complexities. Ehm but not all people are like that. And I think that you will find quite a lot of people in eh disadvantaged communities that are wanting parks. They want spaces for their kids to play. And they

will say, you know, we will work together and we will look after it. So I think the time has come for the City to put in a lot more, lot more effort into developing quality open spaces, well-maintained and secure in disadvantaged areas.
N: So also do you think that the fact that people in LH visit UGS less often that it has something to do with not knowing? They haven't been exposed to green spaces when they were a child? They don't see the benefits of it, so they, they don't want to go? Because they are like: whatever?
S: Yeah. So, okay, summary. That was the first reason. The second one was kind of apartheid legacy that still has their thinking that this isn't ours. That is was foisted on us. And I think the third one is, the third one might relate to kind of Maslow's hierarchy of needs. And in a sense enjoying green open space might be seen as a luxury. Or as something that people can't afford because they are spending all their time just to survive tomorrow. You know, to survive tomorrow. You don't have time just to go and paddle in a lagoon or climb a mountain. Maybe that's less so now. But I think that's still, you know, survival mentality. You don't worry about whether your, your curb stones are, are well-maintained. And you don't worry so much about litter because you are trying to survive and whatever that entails. So that's also I think potentially a reason. I don't think, I think there might be some people that feel, you know, people, black people, or people with low income don't appreciate green spaces as much as we do because they just, they are not able to appreciate it. I don't think that there's anything that suggests that. Ehm, we've, in fact, when you do offer people access to those spaces, you see that they do take advantage of that in a big way. And ehm you also, we also have seen that if you ehm are dealing with the school, some upper to lower income schools and eco-clubs, the kids that are are ally interested in nature, you will find that typically it's not more than, not more than 10% or 5%. No matter what their income group is. And you get people that are just as absolutely passionate about nature in eh informal settlements. As you will in higher income areas. Who their kids here, they might not want to go and [??] in the yard or whatever. But they want to go to arcades and play video games instead of going into nature. So these are the same. It's not a question of whites or blacks or high or lower income. It's other factors I'm sure.
N: Yeah. You said that if you are not exposed to it when you are younger, you might not eh understand. So do you think it's very important that children all get the opportunity to get to UGS?
S: I'm not a 100% sure if that is true. It's just, it's a gut feel. Ehm, that if they're not exposed, then maybe they won't. But, you know, I've also come across people who haven't been exposed to it and then suddenly are and then: wow, their eyes are just opened. They can't get enough of it. So, I'm not sure. But I think either way, there's a very strong argument for kids to have access to green open spaces, and the benefits and enjoyment that come from it. And there's lots of benefits.
N: Especially in, actually, only in LH and in Capricorn/Vrygrond were there people that said that their children never could visit UGS spaces. That there was no opportunity for their children to go outside. Do you think that that will affect their ehm UGS attitude? The fact that they at a younger age don't have this opportunity.
S: It may. My gut feel is that it will. But I'm not sure. Ehm, ehm, it, it could, you could argue that it could be the reverse. You know, that they're kept from it, and then suddenly they have an opportunity later in life, they might be even more passionate about something that they've missed. So it's a difficult one to say, because they haven't been exposed that will have a .. But, I mean, the other argument is much stronger. There are a lot of benefits. Societal benefits that come from being connected to green open space. And depriving people from those benefits is just not on. So, right now, not necessarily for the future, right now kids need to be connected so that they can get the benefit from that. And enjoy the .. Well the benefits that come from being connected to open space. Ehm, even businesses around the world now recognize the importance of connecting people to green open space. So they're making sure that their employees that the half hour that they get for lunch, that they, some of them it's compulsory now that they go into a park, into a green open space. They've done some tests, some employees go into the, the sort of urban paved areas, and other have to go into the green space, and they measure their productivity and there's some interesting results coming out of the benefits of being exposed to green open space. And you've probably seen other studies where prisoners in, in ehm again in I read a case study in California. The prisoners were ehm given the benefits of, of gardening programs. Being connected with nature in that way. And again, they ran some studies and they found that those prisoners were much more ready to go back to society. And it helped them sort out psychological problems and all sorts of things. And they've had other programs connecting prisoners to birds or to looking after animals. And the benefits, the psychological benefits that it brought to them as a result of that being connected to, it's not quite the same of being in green open spaces, but it's connecting to nature. There's something there that's mysterious that we don't quite understand that has enormous benefits.
N: Yeah, I think we are starting to understand more and more about the psychological benefits. You of course know about the health benefits. But this is an aspect that's I think less researched, but it's starting to increase. Ehm, so eh during my presentation I talked a bit about ehm urban density and sustainable urban growth and ehm yeah, whether people think that houses should come where UGS are right now. Eh what do you, yeah, I said a bit in the presentation why I think it's like this. Why do you think that, especially people in LH ehm would agree with this, and especially people in Lakeside, Marina da Gama, would disagree with this?
S: Ehm, yeah, it's interesting. Ehm … it's not surprising. Because people in LH's experience of open space, green or otherwise, is negative. And I must admit, if I was staying there, and there was an open piece of open space next to my house which was polluted and, and full of litter and there were drug dealers there, and there were crimes committed, I, I would prefer to actually live next to a shopping or probably, I could understand that people say, it would be better to have some developed urban scape than green open space. And I think we need to be quite clever here, in creating suitable open spaces in areas of low income areas, perhaps it's not always gonna be green open space. It'll be developed urban scapes, which will perhaps be a combination of, of ehm green and, and other areas. It may be, I don't know, maybe a skateboard park, or ehm, or, or some sort of terraces where people could sit on benches. That there would be trees that would shade them from the sun in summer and elements. And so it's not just a park necessarily.

The in Seoul, the quite well-known ehm restoration of one of their rivers which had been buried under a triple decker highway through the centre of Seoul. Ehm, in 2002 I think, the incoming mayor said he would take down eh the triple decker highway and open up the river again. And, and that's now a feature of the city. But it's an urban scape. And it goes through the middle of the city. So they couldn't open it up to an extent that the river just took its natural course. It still had to be a canalized river. And so it is. It's through a block, it's a canalized river. About six kilometres in length through the centre of the city. But it's wonderfully landscaped. They have trees and they have flower and artwork and signs/science, and events taking place. And it's just a space which everyone in Seoul likes to spend time in. to hang out. And it's ehm, it's urban scape, it's city, it's mostly paved. But with green elements, with landscape elements.
N: So it doesn't necessarily need to be an urban green space. As long as it's a positive space.
S: Yeah. So, it you ask that question in a different way and talked about an urban scape and described it, or had a picture of ehm a dynamic urban scape, maybe with some sculptures or place for people to sit and like Gaudi benches or some people skateboarding and a whole lot of things happening but not necessarily lawns and that sort of thing. More and urban .. You might have got a different score. Yeah, we like that. That'll be cool. Even, things like the young that would attract young people. I'm just trying to think of what those would be. A skateboard rank is one. But where, yeah, young people might not think is that cool is to go and walk around a park and ehm sit on the grass and have their picnic. So what would attract them? Well, let's find out those things and we must build those into our parks and get them to come in. and ehm, and then to enjoy [??], perhaps an urban scape rather than an open natural area.
N: Yeah, I see. Ehm, I forgot my question about this.
S: But of course it's different. I still think you need natural open space as well. It's ehm, maybe your, your park next door. And maybe in areas of poverty particularly we need to be creative about the types of open space. And you did talk about density versus, a higher density, and I actually would say that probably we need to ehm we need to go for a higher density model of, of urban living, and that might be at the expense of some of our open space. I'd rather, you know, we've got five areas of open space that are all degraded. I would rather see two of those turned into really magical areas that people like and the other three developed in some other way.
N: Yeah, I see. Ehm. So, those really, those good quality eh green spaces in for example LH, would those, do you think those should be fenced? Because safety is an issue. Then one solution would be fencing it. Or do you think that's against the idea of a public space?
S: Ehm, yeah, I probably haven't thought this one through sufficiently. I heard your example of this morning, of an area that has been fenced and it's now working really well. No, Ozzy was saying that, not you. In Woodstock. I'm, I'm not totally opposed to fencing. Ehm, and there's certainly a place for it. I think, what if, if, if there's fencing, I think it needs to come from the community. And the community needs to decide, this is the way we're gonna do it. We've worked, the community being involved creating a park let's say. And they decided jointly that they wanna protect it from eh elements. And every community has those elements. Like gangsters and scollies and that sort of thing. That most of the citizens say, no, we don't, and usually it's just a few of those problematic elements that can destroy things for the whole community. So, no, we wanna keep them out, so then we put a fence. But I would rather use ehm, preference would be not to have fences, but to have people. And to employ, for the city to put money in to green stimulus packages, to employ unemployed people to just have a presence in green open spaces that are defined as important. And their presence will make an area as seem safe. The problem comes in about, what do you do at night? Ehm, are these people gonna be there at night in the dark? Generally, you don't want, you don't expect people to go into the parks at night. There are some exceptions. De Waal Park has got lights and people go and walk their dogs at night with the lights. But mostly not. Mostly you want people out of the park at night. And then what if the element come in, the scollies come in and wreck and vandalize. If you've got a fence, the problem is, in South Africa and Cape Town, that usually the fence is a commodity and will then provide almost certainly that fence, if it has any metal, will be eh three-hour clock in the morning, there will be gangs that come and cut it out and they will take it and they will sell it. And get recycled. So you have to keep on finding materials that have no recyclable value. But that's quite difficult, because almost anything, any building material could be used for others.
N: But you won't recycle a person that's there haha.
S: I would rather see people employed. As a general principle. And I think that's the way we gotta go. Rather than fences, get people employed. And the more people that are employed, you are dealing with a social degradation issue, and you are also turning around an area.
N: Okay, I see. We also talked a bit about travel distance of people to their favourite green space, and to the green space they visit most often. Ehm, so there's again, there is quite a bit difference. I think especially this one is striking. With increasing income, travel distance decreases. Ehm, do you think it's a matter of not wanting to travel further or not being able to travel further or just maybe it's just the fact that people with higher income are more likely to live close to desirable urban green space?
S: Yes, the latter. Ehm is, that's what came to me this morning. You know, if you live in a, yeah, in a more upmarket area, your favourite place is going to be present. Anywhere near the, generally the high income ehm suburbs are closer to the mountain, for example. And people in Newlands, Constantia and Bishops Court, it's maybe 300 meters and they're on the mountain there. Newlands forest, to Kirstenbosch. They can access them very very quickly. So there's nowhere, hardly anywhere to go. But yeah, Marina da Gama, there are one or two places, there's the Zandvlei and there's the Park Island, which are close by. Ehm, so that's, that is probably the major reason. It also indicates that perhaps the city is falling down in not doing more to create good quality open spaces in the low income areas. 'cause if there, if 'no income' has to travel six kilometres, so the .. I mean the graph should be the other way in theory, ideally. Ehm, then your why's: okay, they don't have any good quality open space next to them. I'm sure they have open space. But not places that, this is their .. to their favourite place?

N: No, this is the one they visit most often. This is their favourite one. You can see that also in .. With an exception of Muizenberg, mostly the lower income areas travel furthest. Vrygrond/Capricorn, they travel by far the furthest to their favourite one. LH they also travel quite far and MdG, Lakeside, people don't travel far for their favourite green space. This one drops, because there's not enough
S: Right. That could be probably Zandvl.. They're thinking Zandvlei, yeah. And here, and so they live .. They live there.
N: Yeah and this will also probably be Park Island.
S: Hm .. So a similar, a similar [??] up there. But that's, yeah, that graph is more difficult to read than this. Because this is income level. Ehm, you could perhaps do it eh kind of, you could work out the income level of these areas roughly and do a graph like that. You'll probably get the same trend. Ehm, yeah .. So it, it means that, that there should be more quality open spaces, they've probably have been developed there. And then they go, they are not maintained. And the .. the community .. What, I mean what is a factor, is that there, there doesn't seem to be as strong a civil society input in lower income groups, to look after places like .. So Constantia, there's friends of the Constantia Greenbelt. They're passionate. They look after the trails, they keep them clean and whatever. And even the government might not be putting in a lot of money, the residents themselves area taking initiative. But then you can't be too critical, because they have means and mostly ehm half of the family are probably not working and they have a lot of leisure time. and so they can do that. Ehm, there are some areas of .. in lower income areas, in the place that we work in village height, there's the community with birding and her family and what she's trying to do is, is, very encouraging and she's passionate about exposing the children to green open spaces. Nature and creating .. They've got a wonderful garden, they're very proud of it, on what they've got, their vegetables. And, this shows you, and far more responsible in terms of their attitude to green open space than most people in wealthy areas. So it's, it's not an absolute .. But, but that trend is, is ehm yeah, it's disappointing, because it shows that, you know, those places aren't ehm, aren't' readily available. Ehm, yeah. It would be interesting perhaps if you chose eh an informal settlement area on the edge of Table Mountain National Park.
N: To see how ..
S: Just to see how connected they were. 'cause they are living down the park, do they welcome that? Or do they see it as adversarial? In some respect. Would they say that's their favourite open space, or would they say, no they don't wanna go there, they'd rather go to a sports club, something like that.
N: But you can kind of do the same for people that live in Vrygrond/Capricorn, how they react to Zandvlei. Because they also live on the edge of it.
S: True. True. Yeah.
N: Ehm, I don't know right now by heart .. I have a graph there right, if that's the green space they visit often. I should .. Nah, I didn't print it. Like, the graph of the favourite UGSs, I showed today. No, I don't have it here. But ehm I think, I'm not sure.. I don't, no. I don't remember if a lot of people from Capricorn/Vrygrond actually go to Zandvlei. I'm not 100% sure. Yeah, so, also ehm I didn't bring the graph but eh if you would eh show this graph then divide it by ehm ethnicity you would see that ehm especially eh I think yeah ehm coloured people travel furthest to the, to their most often visited UGS. do you think that that could also be somehow rooted in ..
S: Compared to black and white people?
N: Yeah. And black and white people travel eh, it's a very big difference. I might be able to show it here. Ehm, it's, it's a big difference. Ehm and I was just wondering if you think that could also somehow be ehm rooted in apartheid history? Ehm because maybe, a thing I learned is that ehmmm lot of coloured communities used to be on the mountain, or like, on the mountainside. And they were relocated and people tried to stay connected to the mountain by travelling there. So they would travel far to get there. Whereas maybe white people live close to their desirable urban green spaces, and black people are maybe less likely to travel all the way to Table Mountain, because they were not connected to it historically. That's something that ..
S: Interesting analysis. Where black communities .. Most of your low income areas are coloured.
N: Coloured, true, yeah.
S: So if you're getting responses from black people, I'm just wondering where they would be.
N: Ehm, yeah. That's a good thing to look into. (Just checked STATA. 13 of 21 black people are from Vrygrond/Capricorn. Only 18 of those filled out their address).
S: They may be sort of more upmarket black people living in MdG for example. And in places like that. In which case that would cut through them. But, generally ehm I think your analysis is, is probably largely correct about the connectedness the coloured population to Table Mountain. It, it is a very, very strong connection to the community. And if you go, you know, if you go on a Saturday morning to Constantia Nek or Cecilia where people are walking up the mountain, and particularly from Constantia Nek up the bridal path to the dams, the majority of people walking there are coloured communities who presumably don't live close by, that have travelled quite a long way to get there, but they go and they are passionate about hiking on Table Mountain. And they're .. It's kind of a stereotype, but, you know, the more adventurous off the beaten track routes, you don't see them so often. But the .. And there may be factors for that. But then others certainly the bridal path up to the dams and eh, and other areas, they .. At .. Often it's Saturday morning and Sunday morning. Kind of a family outing. You know, big, big, big groups of people together. And they've .. I don't know if they're bussed-in, but they come in and they've travelled long distances. And I think it's to a large extent, it's kind of a .. That historical connection with the mountain. The mountain has kind of a deep symbolism for them. Or you .. If all, all .. If not symbolism, a connecting. Because their grandfather they knew spent a lot of time on the mountain, he loved walking there. And they have inherited that. Ehm, yeah. Where black people probably not to the same extent. Also remember that ehm, under apartheid CT was a coloured preferential area. Which means that there were eh national laws of government keeping black people from coming into CT. They .. they physically weren't able to. Unless they had labour. And there were some standards. They couldn't bring their families.

So it was, largely coloured. Ehm, and that's why the majority of the population still is coloured, although obviously those laws have long since gone. But the legacy continues. It's still mostly coloured area.
N: Okay, I see. Ehm you already mentioned ..
S: Lesser .. Because ehm obviously Khayelitsha is big and Gugulethu, but, but it's still I think you'd find there the majority of people in CT, majority ethnic group, are the coloured people.
N: Yeah. Ehm, yeah, you already mentioned that ehm that something is going wrong at the governance level, that maybe there's not enough emphasis on increasing the quality of green spaces in poorer areas. Ehm, yeah, how would you think this division should be eh, like: should also the community take more initiative or should the initiative come from government or maybe it's like very close connected? How do you see this?
S: It's gotta be connected. It can't be the government coming in and doing it all for the community in a way, because we've seen these mistakes before. It hasn't worked out. So were also concerned that there seems to be an eh drop off of civil society engagement in city processes. An in fact, Bekkie had just started a project which she was going to research this, and ehm probably we want Tiffany to continue and to explore why there aren't more people from civil society engaged in processes which could be to eh give a better, better situation for local communities in terms of facilities, in terms of cleanliness, water sanitation, storm water, all sorts of things. Ehm yeah, the City each year has a budget, so that budget is open to public involvement. Historically there were more ehm actions and engaged groups then there are now. It has seemed to dropped off. Particularly in environmental committees. Wards. So each ward has usually ward committees and street committees and relies to some extent on local involvement. In the involvement of citizens for its success. But we're concerned that that's fallen off a little bit. I'm not quite sure why. Ehm, of course the .. There could be a good explanation. If things really were working well in a, in the municipality at the facilities of there, and everyone's happy, then there .. if you're happy with the status quo, there's not so much reason for you to be involved in all these committees to make it better, because things are working. Things are working. And probably the strongest involvement in civil society came in the years of apartheid and eh that's when people were really making, trying to make a big difference and overthrow the government. And then the legacy of that continued for some years, but it seems to have dropped off. So, I think, to answer your question, I think it needs .. local government probably has to take the lead, and try to look at ways of working with the communities to develop organ .. to develop the structures that can actually work for this communities. So it's not just eh, a top-down. But the .. it's gotta start somewhere. So I think it .. Local government should pursue that as a matter of priority to, to work with local communities. Every town has a project, an engagement on the ground. They should be in very close working relationship with the community in order to make sure it's sustainable. They aren't yeah.
N: Ehm, I showed a figure today about, this one, ehm about ehm what functions of urban green spaces people find most important. Ehm, and yeah, I explained that most people, by far most people find eh environmental aspects most important. But especially in the more low income areas, the cope.. eh no, social and educational is more important.
S: The blue.
N: Yeah. Why do you think that it is like this?
S: Well, Kirstenhof is more middle class.
N: Yeah, but this one.. I don't have enough respondents for this area. So this one eh is not representative.
S: Okay.
N: So that's why.
S: Is there just people there?
N: I think so, yeah. Haha.
S: Ahh haha.
N: You see, 50/50. So we can't discuss that one.
S: Right. Right. Ehm, okay. Ehm .. This relates a little bit to what I was taking about in terms of not necessarily just green open space, natural space, but eh an urban landscape. And I suspect, because the experience of open space in ehm .. lower income areas is a negative one. For all the reasons that we've given. They wouldn't see an environmental reason as being as important as a kind of the social and educational, or even cultural and aesthetics might be .. I kind really separate ..
N: The bottom one is cultural and aesthetics. Sorry, the choice of colour is not good. Except for LH and Vrygrond/Capricorn somewhat ..
S: Again the lower income is certainly ahead of the .. So the way it looks, the culture, the aesthetics and the social, if you combine that, those two, the two blues, they're quite dominant in, in LH. And even Vrygrond. And ehm, and again it says to me that the experience of natural open space is a negative one. Ehm it must be, because if it was a very positive one, then they wouldn't say that. So they're looking for some positive use for that open space. Instead of just a wasteland. And ehm .. they probably like to see something along the lines of described with some facilities for the young people to come and play and skateboard parks, ehm maybe some, even some landscape, things of culture, something that looked good, but it wasn't necessarily just to .. natural open space where the lawn will die and you know, maybe it's because of, of what they've got at the moment. Ehm, I think there's, there's a mistake which we've made .. We've probably all made in the past, of associating natural environmental elements and the appreciation of them only with an upper class thing, and a kind of elitist. And so, loving rivers and wetlands and mountains, I think in the past: okay, only the upper income groups can appreciate those, because yeah, you know, the lower income groups can't for .. I don't think that's right at all. And ehm, I just think it's the, it's the experience ehm what they see in their day-to-day life of, of a degraded area and say well .. And I guess you could talk of environmental, they probably are reading that as nature, ehm green open space. Versus social educational cultural and aesthetics kind of landscaped built-up urban fabric. Something maybe even an environmental centre or a little centre where you can get a meal, coffee. Something like that. Might be more valuable to them than the green open space.

N: Do you think it's problematic that in certain communities the environmental aspect is seen as less important than the social and educational aspect?
S: Ehm, did you describe environmental to them?
N: Yeah, so this is ehm .. This graph I made based on those 25 functions. And ehm per category it's 5 functions. I just took the average per person, how do I explain this, ehm per person. Ehm, the average of those five ratings for economics, that makes up their score for economics.
S: Yes, okay, I understand. So you didn't ask them: which of these five is the most important.
N: No.
S: You had 25, a list of aspects and, and then you conglomerated them.
N: Yeah.
S: So the environmental one was five statements or five areas-aspects?
N: Yes, exactly.
S: That you deemed as being environmental. But you also said that there were some cross-overs.
N: Yeah, some cross-overs.
S: It could've been health; it could've been social.
N: Yeah. There were some difficult ones. But there were also some very clear ones, like: ehm under economics: bring economic benefits. That's clearly economic. And environmental: brings environmental benefits. And ehm, also ehm I think under social and educational it's for example, ehm being together with friends and family. Like, some are really clear, but there are some, like ehm, what was it: light and noise pollution, could be environmental, could be health and well-being. Yeah.
S: Yeah. It could. Ehm, the environmental ones, ehm, were those in your survey mostly the natural environment?
N: Yeah. So it's ..
S: Wetlands and green open spaces and indigenous vegetation and birds and ..
N: The five ehm questions eh in the environmental category was ehm: place for ehm wildlife and plants; ehm environmental benefits such as ehm mitigating climate change; then we have, filtering the air, but that could also be health and well-being, the we had ehm controlling and retaining rainwater; ehm preventing soil erosion and the last one, I forgot the last one.
S: Yeah, but those, those are all good, ecosystem services that come from the natural environment. Ehm, yeah, again I think it's .. When you think of Baba Diam's quote again, people will respond only from their experience and what they see on a day-to-day basis. And that's probably stronger than what they see on TV and what they learn in school. So they come home, they walk through their area and their place where they kick a ball around, its kind of an open degraded space, the parents are anxious because of drug dealers and maybe there are gang fights. LH in the recent months has been some shooting. And ehm .. And violence. And in fact, you probably read about these children being murdered. That's their experience. And so, I don't think those .. As important as they are to us, clean air, clean water, flood regime, deviation and all these things, and wildlife. Probably aren't as important as: we need a safe, secure place where we can just enjoy and yeah, it doesn't have to be nature. So, so I think that's probably the reason .. And I don't think it's .. I wouldn't say that ehm .. It's too much of concern. The .. Ehm, I think the package of benefits that come with natural space, natural open space are probably broader than those five categories and, and have elements of these other categories as well. And it's that whole package of goods that ehm, that we're wanting people to, to benefit from. Not just the clean air, wildlife, and those are the benefits. So I, I think it's, it's .. I think the concern is that maybe there is still a disparity of ehm assets in lower income and higher income areas. And that needs to close. Even though, I'm sure if you look at where budgets are, then there's probably more budget for parks in lower income areas then there is in upper income areas. Actually I don't know. There's certainly more parks in low-income areas, but there's smaller ones. But the bigger ones like Wynberg Park, probably have big budgets. But that's .. it's another interesting thread because ehh I remember the time of the World Cup. The, there was some concern that we were building this green urban park at Green Point, which is a wealthy area and people would say: well, you should build it in the Cape Flats. So I think there were some surveys done. People who were living in the Cape Flats in lower economic areas, they were saying: you know, what's your feeling? And we were quite surprised that a lot of people there said: Green Point. It should be Green Point. Because they want to get out of where they're staying. Maybe in a grotty areas in Langga or Gugulethu. They don't wanna .. Kind of a park there, because they probably know it's gonna be degraded. They wanna get out on a Sunday, and they wanna go to somewhere nice. Whether it's the mountain or Green Point Urban Park. It's a place to escape. To, to escape their living circumstances. As opposed to a place where they can walk down the street and enjoy a green open space. So that's sad that that is the reality, but it is. And we need to do some .. Whatever we can to close that. So the source to sea project has that vision of, you know, it's a river going from high-economic, middle to lower economic areas. And how can we transform the middle-to-lower so that people can have fun there, feel secure, and the whole thing can work as a corridor which is safe and secure. And the only way you can do that really is by employing a lot of people. That can be seen as a presence, visible presence of people all the time up and down. Fences wont work there. In fact, we wanna take fences down, because I think they're distractive in that sense. They just catch litter and they can be counter-productive. It's gotta be people. People and camera's. ehm, the CBD area, Ozzy was saying it, the centre of the city is becoming, is become much more popular because it's safer. And that started about 20 years ago when there was this big move to get CCTV camera's in through the whole city. And now I think there's .. The city is covered, theoretically. Somebody is looking into these camera's and can see everything going on in the city. So if there something happens, ehm there's a mugging, that should be seen and the people can be intercepted and caught. And at least there's the perception that that is the case. You being watched. So that's already made the city centre so much more safe then it was. Ehm, and that's a vision for source to sea. We can make it completely safe like that with people and camera's. I think that's, that's the answer.

N: So that's also, actually it's interesting that you mention that. Because it was also one of my questions. Should we focus on improving the quality of the urban green spaces in certain lower income areas, or should we make sure that people from those areas can get out of their area into good quality urban green spaces elsewhere. But you just actually answered that question.
S: Yeah, well, I .. Yeah, I'd say that we need to do both.
N: Both. Yeah.
S: Yeah, we need to do both. I am also not sure how you go about ehm making sure that people can access the ehm, you know, it's public transport. Perhaps you make sure that the MyCiti bus should .. Goes to some of those key nature spaces. Ehm, but you know, people is going to have to pay for them. I guess. Ehm, but yeah. They .. Maybe, we should make sure that the MyCiti bus goes to, to different places. [Talks to bar tender].
N: I think we're almost done. I had two questions about conservation, but ehm, we can either quickly ..
S: Well, ask them.
N: So, one is, to what extent do you think there's a trade-off between frequent human use of certain nature reserves and ehm the protection of biodiversity? Or .. I could email that question to you?
S: Ehmm yeah. It's again the context of CT. it's a difficult question because CT is a biodiversity, global biodiversity hotspot. Ehm maybe the urban global biodiversity hotspot. Maybe only Sao Paolo and Rio perhaps can compare. Ehm, 11 of the 20 physically endangered ecosystems, eh vegetation types in SA are found here in CT. that's a frightening statistic. Ehm, so we have a global responsibility to protect our biodiversity. Also, it .. Because if it's so sexy and important, it should be a valuable commodity that could .. I mean, people come from all over the world because they .. there's not .. to see this biodiversity. Or to experience it. And to wonder at it. But we need to, we need to sell it in a way that it really works for tourists and, you know, potentially we could exploit it. Create green jobs. And bird tourism, you've probably seen it: Zeekoevlei and the southern birding area. There were certain rare and endangered species spotted. People come from all over the world, literally. Fly in to see these birds. But even so, it's scratching the surface. And we could improve that delivery to a large extent. We could make it a little bit like the penguins at Boulders. And it could start generating huge numbers of jobs for people in poverty in the area. Ehm, biodiversity too. We should be able to sell our grand jewels better than we're doing. We're not doing a very good job I think at marketing and selling it. But on the other hand, ehm, you don't need to ehm .. people need to use, you know, the idea of the olden days. Under apartheid. Under apartheid, the government were, were pretty on top of protecting nature conservation. And through fences and all sorts of things. It was a philosophy of keeping out. Keeping people out of those areas because they were damaging it. So now it's ehm, it's different. I mean, people realize that you, you can't keep people out. You've got to .. you've got to connect people with nature. And could you do it in a way that's balanced? So that you don't destroy the capital of the asset that you're trying to protect? It's like that, you know that bank account doesn't work if you loose your capital. You can't keep withdrawing. So can you keep benefiting? And getting people to enjoy it? Yes, you can. But you gotta balance it in a way that works. So we're looking at trail running for example, in natural areas. Yeah, okay, we have a big trail running event. Does that impact on the biodiversity? Yes, probably it does a little bit. But can you make that work? Because if you have a big trail running event, you pay an entry fee and if the portion of the entry fee goes back to the conservation management and can restore and rehabilitate, and actually make provision further for it, then you're having a win-win. So how can you, I don't want to choose one over the other. I want both. I want to be able to conserve the biodiversity, because that is important, but also to enable people to enjoy it. Ehm, about 30 years ago there were ehm, there were 2 dams sights that were being looked at in the western cape for the next big dam for water. A reservoir for water supply. And the one was at Paarl. Just outside Paarl. The Paarl municipality needed to build a dam in Ben's Kloof. Have you been to Ben's Kloof? It's outside Paarl. It's one of .. it's a very popular recreational area. It's in the mountain above Paarl. Above Wellington. It's wonderful. It's beautiful valleys. There's one that's called Happy Valley and it's got little trails and picnic sights. And that was one of the sight that was identified by engineers as ehm, as a potential dam site. And that was .. I was then environmental consultant and we were doing an environmental impact assessment for that. And at the same time, the national authorities, the department of water affairs nationally, were looking for another major dam sight in the western cape. Did you get to Krochelburg at all? Ehm near Betties Bay. Ehm Claremont.
N: No.
S: I'm sorry. I feel I've let you down. The Krokkelburg is the heart of the fynbos kingdom really. It is the place. And it has absolutely stunning, stunning trails and, and rivers, waterfalls and pools and hikes. It's just wonderful. But ehm, it's a .. it's a sensitive area from a biodiversity point of view. And in the .. before the 1980s, before the 1990s, there's the authorities regarded it so sensitive that they didn't allow anyone to access it except scientists that were doing research. And even then it was very controlled. So not many people knew about it. Ehm, and ehm although it as an incredibly rich area in diversity, certainly a global hotspot, there wasn't much outcry and protest when that site was being investigated as a dam site. But the Happy Valley site park, there was a huge outcry. And Paarl.
N: Yeah, because people ..
S: Because people would access it and they would go there and have picnics in the weekend, and they knew that. That was their favourite .. That would've been their favourite open space. For many people. And they would go: no, there's no way you can build a dam here. Hands of our Happy Valley. And the Paarl municipality realized, we did some public participation there, they knew that this wasn't gonna work.
N: So it was actually a biodiversity value for letting people in. because they then understand the value of that space and can voice, protecting it.
S: Yes. They might not have understood the biodiversity value. But they understood the value .. recreational value. And they just enjoyed going there and being involved in that open space. Whereas the, the really important area from a biodiversity point of view, nobody said much. As it happened for other reasons, they decided not to develop this

dam, but the CapeNature authorities realized the mistake that they've made and they said: no, we are going to have to revise our policy, and now you can access that .. or controlled access. You can go on hikes in that area. And it is now a very popular and very important recreational and biodiversity area. And hopefully will never be dammed. For a dam site. You're going to have to come back, so many of these places are so important for our preservation. [Chit chat]. What was the second conservation question?
N: Oh, the second one was, especially in, people in LH see that as not very importan.t biodiversity conservation. Ehm, yeah, my question again. Do you think that that's a problem. And why do you think it is like that? It's again this curve from high income ehm areas think biodiversity conservation is very important and the lower income areas think it's not very important. But I guess that's the same answer like, it's more their social ..
S: Ehm, I've yeah, I mean it's, it's a number of things. I think, I talked about Maslow's hierarchy of needs. And if you're in survival mentality then biodiversity eh, not that important. But as you move through that, and you don't have to worry too much about survival, that's quality of life and other things and recreation, then you realize .. it's also education. And again ehm, I mentioned Baba Diam a number of times. People will only really conserve what they love. And understand. And have been thought. and yes, they .. people go to school and they are thought these things, but I think the education is really poor. In many of the schools. So I think they just don't know. To be honest. And it's, firstly they don't know, and they don't experience it. As I said. That's almost more important. You can learn something and ehm ehmmm … Yeah, and eh it's ehm … if you don't experience. Ehm, yeah, you go out and you, you can enjoy it and experience it. See it and understand. Then you understand it more. So, it's, I think its partly education. And partly a kind of a hierarchy and, and, it's also .. it's a jewel in our [??] Cape Town. It's one of our biggest assets. Potentially one .. it's a huge job creator. We haven't marketed it. We haven't profiled it. We haven't sold it. We haven't made it accessible. People don't understand it, what all the fuss is about when biodiversity comes in. this is fantastic, biodiversity hotspot. Means nothing to most people in CT. how can we turn that around? Yeah, the wineries are meant to be ehm really .. important. Ehm and people know about them, you know. Winery, it's wine farms, wow, that's, it's one of our big 5. It's a big asset. And they understand things like beaches and ehm the mountain, but ehmmm biodiversity .. not really so much. And yet we are, you know, it's just a huge resource. And ehmm we maybe need to look at, at marketing it. You know.
[Chit chat]