Final report

Green public spaces and sustainable cities in South and Southeast Asia: Integrating needs and societal wellbeing

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Executive Summary Abstract

According to research conducted in four cities in Asia – Chennai, Shanghai, Singapore and Metro Manila, green public spaces are unique satisfiers for meeting human needs. While the contribution of such spaces to human health, biodiversity and the microclimate in cities are widely acknowledged, the results of this study demonstrate how important parks are for the wellbeing of diverse groups of people and a variety of activities. Based on qualitative methods, the project explored the relation between the social practices associated with going to a park and how these contribute to the normative goal of human need satisfaction. Research was conducted in nine parks in four cities, after which workshops and interviews were organized with different stakeholders responsible for park management and territorial development. In dense Asian cities, parks allow people of different social backgrounds to experience a natural environment, perform activities that are important to them, and experience a sense of community and belonging. Thus, green public spaces allow people from different social groups, age groups, and gender to achieve *sustainable wellbeing*, understood as a form of wellbeing that meets human needs with a respect for environmental and social considerations.

Executive Summary

The research plan

This research project set out to demonstrate how and in what way green public spaces are synergic satisfiers towards human wellbeing, with a focus on four coastal mega-cities in Asia. The starting point for this project was that public spaces are integral to sustainability, as they not only harbor biological and microclimate diversity, but also promote individual need satisfaction as well as societal benefits such as: social inclusion, democratic engagement, and opportunities for leisure and livelihood generation. As such, they are potential satisfiers for a variety of human needs, including living in an environment that is worth living in, or being part of a community, or realizing one's own conception of daily life. At the same time, green public spaces are a limited resource, both in relation to space allocation and types of usages. How public spaces are used to satisfy needs by one segment of society can compete with need satisfaction by other segments of the same society, creating tensions around the usage of green public spaces. The bigger and more diverse the city, the more this issue gains in importance.

Each of the four mega-cities in South and Southeast Asia included in the study are facing specific pressures in terms of city expansion, and are home to diverse socio-economic populations: Chennai (Republic of India), Metro Manila (Republic of the Philippines), Shanghai (People's Republic of China) and Singapore (Republic of Singapore). The novelty of this project was to uncover the multiple needs satisfied by green public spaces and the implications for the management of such spaces and city planning, in these diverse cultural contexts. Limited empirical research exists on how people interact with public spaces in emerging economies, including the material arrangements of these spaces, people's dispositions and ways of using these spaces, and the social norms governing these practices. Bringing together environmental studies, sociology and philosophy, this turnkey research project delivered a comparative study that resulted in concrete recommendations for promoting sustainable forms of park management and urban development in these cities, as well as other cities in the region and beyond. At the time of this writing, as the COVID-19 pandemic has led to the closure of green public spaces around the world, the importance of these spaces for human wellbeing becomes all the more obvious.

The main proposition of this research proposal is that green public spaces can act as synergic satisfiers towards human wellbeing in that they provide satisfaction for a diversity of needs, but that how this plays out in practice may differ in various contexts and cultures, and across social groups. A comparative analysis was needed in order to contribute robust empirical evidence towards theoretical advances linking needs to satisfiers.

The main research question was: In what way do green public spaces act as satisfiers for meeting multiple human needs in the cities of South and Southeast Asia? The three main sub questions and associated hypotheses were as follows:

Q1: How do people practice green public spaces in daily life, in relation to material arrangements, dispositions, and social norms?
- Hypothesis: individual need satisfaction related to green public spaces reflects diverse practices

Q2: Towards what needs and for whom do green public spaces act as satisfiers?
- Hypothesis: public spaces satisfy multiple and sometimes competing needs, depending on context, class and cultural factors

Q3: What are the implications for the management of green public spaces and urban planning, at the local and cross-regional level and with a view to sustainable development?
- Hypothesis: green public spaces are not always sustainable: there are trade-offs between social, environmental and economic factors

Regarding the methodology, the qualitative research in parks in the cities under study involved a three-pronged approach: first, we asked people a series of questions related to their park practices; then, we invited participants to reflect and react to a list of Protected Needs (Di Giulio and Defila 2020, used in English, and translated into Chinese and Tamil by team members; see Annex); finally, we invited people to take pictures in the park, and share a short text-based explanation of the image, towards further uncovering the links between parks and wellbeing. In relation to the list of needs, we asked people whether the activities they carry out in the park allow them to satisfy one or several of these needs. We also discussed how the park relates to other spaces in the city and what is unique about the park. The needs were presented in a visual format and written texts, including descriptions provided by each research team.

For park practices, we designed the interview guide around elements of social practices, involving 1) people's competencies and dispositions (e.g. what they like or dislike, how they feel about being in different areas, their most or least favorite spots, where they feel safe or unsafe, what they believe is meaningful to their lives), 2) material arrangements of these spaces (e.g. lighting, infrastructure and other facilities, landscaping), as well as 3) social norms and regulations (e.g. explicit rules or implicit guidelines about what people can or cannot do in the space, who can use or not use the space and in what occurrence).

We began with a pre-selection of green public spaces in the four cities, including parks and beach-fronts, then agreed on criteria for the selection of at least two parks per city based on a consideration for the diversity of park users, the accessibility of the park in relation to the city and transport options, and the significance of the parks in relation to cultural heritage, biodiversity or other features. We also aimed for diversity in park users, in terms of age, gender, employment, and particularly social class. Approximately fifteen interviews took place in each park, at different times of the day and the week, to capture this diversity.

The results obtained and an analysis of them

The results obtained relate to conceptual developments and empirical findings.

In terms of conceptual developments and as discussed in Sahakian and Anantharaman (in press; open access), we found that needs are always satisfied by social practices and the different elements that make up practices. This has methodological implications: only by studying the different activities associated with "visiting a park" can you get at the material arrangements, social norms and regulations, and skills and competencies involved in enabling need satisfaction as a normative goal. Such an approach goes beyond what people say and what can be observed, to uncover how and in what way people go to the park. Another important conceptual finding is that people can relate a list of Protected Needs to their everyday lives

– even in settings where people are not used to identifying needs, or distinguishing needs from desires or wants. An approach through Protected Needs also reveals that parks are not solely about recreation or exercise, which are often the pursuits of upper and middle classes in the cities of South and Southeast Asia, but can satisfy multiple needs through diverse activities by groups from varying social classes. Publicly accessible and well-maintained green spaces are important for all people, but particularly for those who lack access to private spaces or commercial spaces. Identifying the material arrangements, social norms, and competencies that combine to satisfy needs via the performance of practices helps us understand which particular 'element of practice' enables or inhibits need satisfaction for different groups. This was useful when it comes to discussions with environmental organizations, governmental officials and urban planners in these cities, towards informing park re-design by enabling a focus on uses and benefits that are of pertinence to more people. It also underlines the importance of maintaining park amenities and infrastructures across cities.

In terms of empirical findings and as discussed in Sahakian et al (in press; open access), green public spaces satisfy all of the nine Protected Needs, with an emphasis on needs such as to live in a livable environment (PN 3), to develop as a person (PN 4) or to be part of a community (PN 7). Although each park and city are different, the activities that people do in these parks meet similar needs across the research sites. In most of the parks, culture and natural heritage were important to people: for example, in Singapore, migrant workers visit the park to see trees that remind them of home; in the Philippines, going to the park might entail learning about older trees that are part of the cultural heritage. In relation to material arrangements, different features in parks are important towards needs satisfaction, such as park benches, sports areas for adults, play areas for children, walking and biking lanes, lighting, but also operational toilets and water fountains. In all of the parks, shade from the sun and shelter from the rain were also valued. Another important finding was the importance of the park for doing activities that are non-commercial and do not entail some form of productivity, such as walking, sitting, or doing nothing in particular. Most respondents found that it was possible to feel freer in parks than in commercial spaces, such as the shopping mall; the rules and regulations governing behavior in parks was less constraining. In some cases, people (particularly young people and women) felt that they had more freedom in the park than in their own homes. Finally, people came to the park to feel a sense of community with others, regardless to whether they came alone, or with family and friends. In this sense, people like to experience being around others, which satisfies their need to belong to a community – regardless of whether they are alone or not.

In Table 1 below and as presented in Sahakian et al. (in press), we demonstrate what needs were satisfied by "going to the park" as a practice and across all of the cities under study.

Table 1 The Protected Needs that are satisfied in the parks

City/park	Protected Needs 1-9								
	PN 1	PN 2	PN 3	PN 4	PN 5	PN 6	PN 7	PN 8	PN 9
Chennai									
Anna Nagar Park		3	9	1		8	8		2
Nageshwara Rao Park	1	4	7	4	1	4	4		
Perambur Park	3	3	6	1			2		
Metro Manila									
Rizal Park	1			3		2	10	1	1
UP Academic Oval Park	2		6	4	1	4	6		2
Shanghai									
Daning Park	9	4	11	1		6		1	2
Zhongshan Park	3	5	10	2	3	9	6		1
Singapore									
Botanical Garden Park	5	4	11	6	5	4	9		2
East Coast Park	4	9	11	6	6	11	10		5

Legend: Dark table cells = respondents say that the Protected Need is satisfied by practices in this park; Number in the table cell = number of interviews in which the Protected Need is explicitly mentioned.
Source: Sahakian et al (2020), *Journal of Public Space*.

We set out to explore how and in what way diverse people use parks, and as such some points of tension were uncovered. There was some competition between users, as need satisfaction for one group of people can compete with need satisfaction for another. Older Singaporeans for example often deplored the use of the park by teenagers who like to have barbecues; a booking system was set up to allow park visitors to lease these spaces free of charge. In Chennai upper and middle-class park users enjoy the parks for sports and recreation, and may seek to exclude vendors or other people seeking livelihood opportunities in parks. In Shanghai and during the warmer months, parks can be quite busy and may necessitate some competition between residents and migrant workers who also enjoy parks. In addition to competition between people, parks also compete for available space in a city, where there are often capitalist pressures to exploit available land for commercial purposes, such as shopping malls and new commercial apartments. In the Philippines, the *Green, Green, Green* program funds the development of open public spaces in all of its 145 cities, but is up against economic development programs that have other priorities. In Chennai, new parks often involve the removal of informal settlements were poorer populations live. In Singapore promotes, green public spaces are tied up with city-state building and are important sites for tourism.

A summary indicating whether the results obtained correspond to those expected at the beginning of the research

The main research gaps that we identified at the start of the project have been covered, including:

Providing robust empirical evidence, on daily practices associated with green public spaces and described through a practice-centered approach (e.g. detailing material arrangements and

equipment of spaces, people's dispositions and ways of using spaces, and social norms around those practices). This also involves further comprehension of how public spaces relate to need satisfaction and wellbeing in different cultural contexts, and how they can be synergic satisfiers. This was achieved, both through directly asking people about Protected Needs, and relating Protected Needs to park practices.

Theoretical advances, in terms of relating needs to the social practices associated with green public spaces, as discussed above. In terms of methods, we also engaged in participative methods (through workshops with stakeholders at the end of the project term), to uncover how need satisfaction can be made relevant to city planning. We also wanted to generate policy-relevant results, which we have achieved – towards supporting green public spaces in cities.

Information regarding the practical application of results

The end of the project coincided with the spread of the COVID-19 pandemic, in Asia, Europe and elsewhere. While much attention is now focused on health and economic priorities, we find that our research results are very relevant to our times. People across the world were shut out of green public spaces, revealing inequalities between people who have access to private outdoor spaces and those who do not. At the time of this writing, we are issuing a press release on project results in order to emphasize the significance of green public spaces in times of crisis and beyond.

Questions that merit further exploration (scientific, practical, methodological) or that have arisen as a result of the research

The green public spaces project used these spaces as an entry point for exploring the link between consumption and wellbeing – using the analytical framework of social practice theory and the normative aim of need satisfaction. Further research is necessary on relating wellbeing to diverse forms of consumption, not solely the consumption of outdoor spaces. There is a growing literature on how wellbeing relates to energy usage; similar work could be done in relation to food provisioning, housing size, mobility, leisure and travel, among other consumption domains. Green public spaces or gardens and the ageing society is another topic of interest, as seniors are often the main body of users or visitors in many parks. It would also have been interesting to explore how park managers conceptualize the usage of the parks, that is, the practices performed by park users.

In addition, it could have been interesting to further explore how people in different countries would have reacted to the notion of Protected Needs – or the contextualization of universalisms. Due to time constraints, we used an existing list of Protected Needs established in Switzerland by the co-coordinator of the project (Di Giulio and Defila 2020), which was translated into different languages; researchers also provide context-based descriptions of these needs. Another approach could have been to guide a process whereby such a list would emerge, or where the descriptions would emerge. Further, it could be interesting to explore why Protected Need 8 does not feature prominently in all four cities ("To have a say in society"), and how this relates to public spaces as possible spaces for political engagement. Lastly, research could also be planned in other spaces in the cities – such as commercial centers / shopping malls – to further uncover the differences between how such spaces satisfy or fail to satisfy human needs.

Practical and policy recommendations that follow from the results obtained

Green public spaces should be promoted and protected in the cities of South and Southeast Asia, as they are critical towards need satisfaction for a diverse group of people. Such spaces, due to their material arrangements and green cover, provide cool microclimates and help attenuate the urban heat island effect. While parks may promote healthier lifestyles and environmental biodiversity, they also met a variety of other needs – including, for some, a means of livelihood and relief from stress. We argue for policies that consider Protected Needs and place such needs at the center of deliberations on the use of urban space, while accounting for social diversity.

Information regarding past and expected publications and other activities (articles, books, conferences, workshops, etc.).

The following article has been published in a peer-reviewed journal:

> Sahakian M, Anantharaman M, Giulio AD, et al. (2020) Green public spaces in the cities of South and Southeast Asia: protecting needs towards sustainable wellbeing. *Journal of Public Space* 5: 89-110.
>
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> - https://www.journalpublicspace.org/index.php/jps/article/view/1286/782

The following article has been accepted in a peer-reviewed journal and will also be made available in open access:

- Sahakian, M and M Anantharaman (2020, accepted in press) What space for public parks in consumption corridors? Conceptual reflections on need satisfaction through social practices. *Sustainability: Science, Practice and Policy*.

An abstract has been accepted for the Handbook on "Sustainable consumption and quality of life: towards integrating consumer policy strategies for improved life quality":

- Di Giulio, A, M Sahakian, M Anantharaman, C Saloma, R Khana, S Narasimulu and D Zhang: *How consumption of green public spaces contributes to quality of life: differences and similarities in cities of South and Southeast Asia*

In addition, an abstract has been submitted for a special issue on Degrowth and urbanization (most likely for end of 2020 or early 2021):

- Anantharaman, M, M Sahakian, C Saloma and A Di Giulio: *Radically restructuring the urban commons towards sustainable wellbeing: the case of green public spaces in Chennai and Metro Manila.*

In addition, project results were shared at various conferences including:

- Consumption Corridors Workshop, April 2019 in Geneva
- Healthy Cities Workshop, May 2019, Manchester
- European Sociological Association conference, August 2019
- Local resources, territorial development and wellbeing, workshop in September 2019, Grenoble
- 19th European Roundtable for Sustainable Consumption and Production (ERSCP 2019), October 2019, Barcelona
- Knowledge2Action in South Asia - Cluster of Cooperation (K2A South Asia), Dialogue Workshop, Bengaluru, India, 15-17 January, 2020
- First ASEAN University Network-Ecological Education and Culture Conference? Ateneo de Manila University, March 2020. Abstract was accepted by conference postponed because of the COVID-19 pandemic.
- SCORAI conference, Copenhagen/Boston, June 2020.
- World Sustainability Forum conference, Geneva, September 2020 (postponed to 2021 due to the COVID-19 pandemic).

Research partners

Switzerland team
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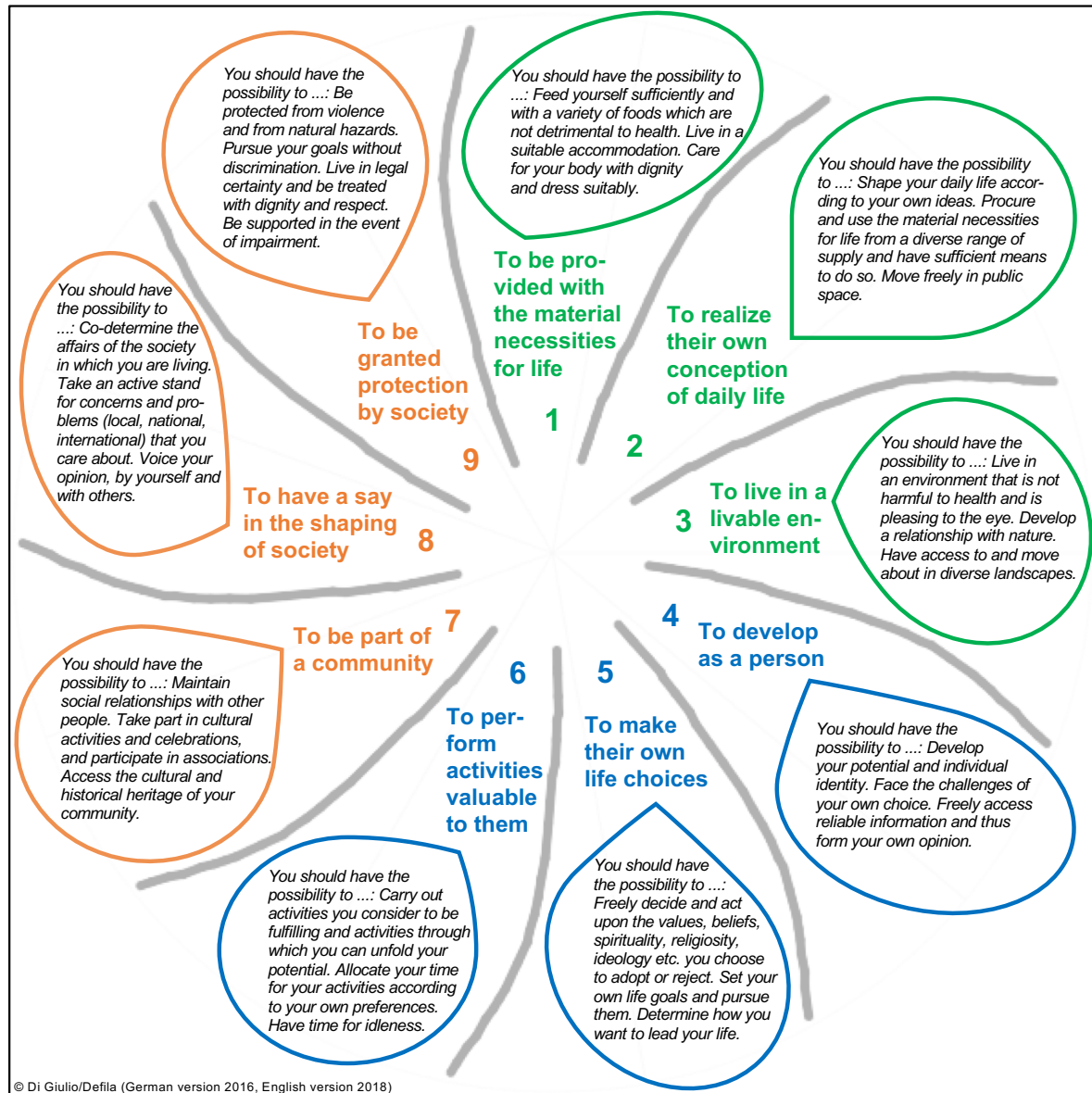
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Annex: List of Protected Needs Used in Interviews

List of protected needs

You should have the possibility to ...: Be protected from violence and from natural hazards. Pursue your goals without discrimination. Live in legal certainty and be treated with dignity and respect. Be supported in the event of impairment.

You should have the possibility to ...: Feed yourself sufficiently and with a variety of foods which are not detrimental to health. Live in a suitable accommodation. Care for your body with dignity and dress suitably.

You should have the possibility to ...: Shape your daily life according to your own ideas. Procure and use the material necessities for life from a diverse range of supply and have sufficient means to do so. Move freely in public space.

You should have the possibility to ...: Co-determine the affairs of the society in which you are living. Take an active stand for concerns and problems (local, national, international) that you care about. Voice your opinion, by yourself and with others.

To be granted protection by society

To be provided with the material necessities for life

To realize their own conception of daily life

9 **1** **2**

To have a say in the shaping of society

8

3 **To live in a livable environment**

You should have the possibility to ...: Live in an environment that is not harmful to health and is pleasing to the eye. Develop a relationship with nature. Have access to and move about in diverse landscapes.

7

To be part of a community

4 **To develop as a person**

6 **5**

To perform activities valuable to them

To make their own life choices

You should have the possibility to ...: Maintain social relationships with other people. Take part in cultural activities and celebrations, and participate in associations. Access the cultural and historical heritage of your community.

You should have the possibility to ...: Carry out activities you consider to be fulfilling and activities through which you can unfold your potential. Allocate your time for your activities according to your own preferences. Have time for idleness.

You should have the possibility to ...: Freely decide and act upon the values, beliefs, spirituality, religiosity, ideology etc. you choose to adopt or reject. Set your own life goals and pursue them. Determine how you want to lead your life.

You should have the possibility to ...: Develop your potential and individual identity. Face the challenges of your own choice. Freely access reliable information and thus form your own opinion.

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