GREENKEYS

URBAN GREEN AS A KEY FOR SUSTAINABLE CITIES

UNLOCKING GREEN SPACE: PERCEPTIONS AND ATTITUDES ON VARIOUS ASPECTS OF URBAN GREEN SPACE

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Unlocking green space: perceptions and attitudes on various aspects of urban green space

1. Introduction

Urban green space (UGS) defines our communities. Parks, gardens and other green areas improve the quality of urban environment, provide opportunities for relaxation, recreation, association and social interaction and they help communities to shape their identity and to strengthen their social fabric. In addition, by providing clear air, water and soil and by helping to stabilise urban temperatures and the urban climate, they support the development of a healthy environment in harmony with the natural word. Alongside these social and environmental effects, however, there are also economic benefits. Good quality UGS improves the quality of life in cities enhancing their attractiveness to residents, employees, tourists, investors and firms. On these grounds urban green space can have a positive contribution to the competitiveness of places and their economic development.

Within this framework, the current research explores people's perceptions and attitudes towards UGS with specific focus on its economic aspects. In particular, it sheds light on a number of issues regarding:

- the quantity, quality, cost, visitability, economic potential, provision, improvement and finance of existing UGS
- the necessity, quality, cost, attractiveness, economic potential, provision and finance of prospective UGS
- the willingness of people to pay for the provision and the improvement of UGS, and
- their stance towards reduction of UGS.

These objectives have been explored with surveys held in the 11 municipalities taking part in the GreenKeys project.

This report is structured as follows. The next section reviews the available literature, which provides a knowledge base with regard to the benefits of urban green. Then, an overview of the employed research method is provided, following a 'green' profile of the cities under investigation. After that, the report discusses the results of the survey providing tentative answers to the issues set above, and the final section concludes the report summarising the key findings.

2. The benefits of urban green space

Green spaces (GS) constitute an essential element of all cities Good quality urban green improves the quality of life in cities enhancing their attractiveness to residents, employees, tourists, investors and firms. On these

grounds UGS can have a positive contribution to the competitiveness of cities[1]. Alongside these economic effects, however, there are also social and environmental benefits, with complex interrelations between them. Such wide-ranging benefits mean that UGS embody the 'public good' of classic economic theory. In other words they deliver benefits or services that cannot or will not be produced for individual profit, and therefore they are not traded in conventional markets and have no market value.

The important role GS play in cities and towns has been acknowledged to various degrees even since the end on the nineteen century (Goede *et al*, 2000; Swanwick *et al*, 2003). However, over the last fifteen years or so, there has been a resurgence of interest in UGS. According to Swanwick *et al* (2003), this was driven by many factors, including the apparent decline of both quantity and quality of urban green (as a result of low priority in the local authorities' political agendas), the key position GS holds in the concept of 'compact city' which has seen an increasing attention in the literature (see Burton, 2000; Duany *et al*, 2001; Neuman, 2005) and the growing emphasis on brownfield development which exerts pressure on the urban green land to be given to alternative uses.

This increase in interest has given rise to a number of academic papers (e.g. Rodenburg *et al*, 2001; Kwak *et al*, 2003; Morancho, 2003; Bycan-Levent and Nijkamp, 2004; Wolf, 2004; Mansfield *et al*, 2005; Arvanitidis *et al* 2007), professional studies (e.g. CABE Space 2004, 2005; Land Use Consultants, 2004; National Audit Office, 2006) and European funded projects (URGE-team, 2004; de Ridder, 2004; Greenspace, 2005; Kasperidus *et al*, 2006) related to UGS. Overall this literature has highlighted the wide-ranging benefits of high quality GS to urban areas.

From an economic perspective good quality GS can add value to the surrounding property, both commercial and residential (Luttik, 2000; Kim and Johnson, 2002; Morancho, 2003; Crompton, 2005), consequently increasing tax returns to local authorities (Land Use Consultants, 2004). Moreover, it helps to create a favourable image for a place, boosting retail sales (Wolf, 2003) attracting tourism (Woolley, 2003) and inward investment in the area (Downing, 1999; CABE Space, 2005), encouraging employment (Dunnett *et al*, 2002) and even exerting a pull on skilled labour (Glaeser *et al*, 2001; Tajima, 2003).

From a social perspective urban green has an impact on a wide range of issues ranging from community involvement and empowerment, to matters of safety, inclusion, equality, civic pride, education and recreation (see Land Use Consultants, 2004). In particular, scholars have pointed out that well managed and maintained GS contribute to social inclusion and social justice (Burgess *et al*, 1988; Loukaitou-Sideris, 1995; Ling Wong, 2003), provide cultural links and opportunities for community events and outdoor

[1] Storper (1997: 20) defines urban competitiveness as "the ability of an economy to attract and maintain firms with stable or rising market shares in an activity while maintaining stable or increasing standards of living for those who participate in it".

association between people (CABE space, 2004), provide an educational resource with regard to environment and nature (Nicol and Blake, 2000), afford recreation, exercise and play for all ages (Taylor *et al*, 1998; Taylor *et al*, 2001; Woolley, 2003) and contributes to the physical, psychological and mental health of the people (Ulrich and Addoms, 1991; Burne, 2001; Ellaway *et al*, 2001; Takamo *et al*, 2002).

From the ecological/environmental perspective, GS support sustainable urban development, by absorbing pollutants, providing clean air, soil and water and stabilising urban temperatures and humidity (Plummer and Shewan, 1992; De Groot, 1994; Hough, 1995; Bycan-Levent and Nijkamp, 2004). They also provide habitats for wildlife maintaining or improving bio-diversity (Gilbert, 1991; Niemela, 1999, Wooley, 2003).

3. Questionnaire survey: the economic aspects of green space

3.1 Methodology of the survey

In an attempt to record perceptions and attitudes towards GS, a survey was carried out in 11 municipalities taking part in the *GreenKeys* project. These municipalities are the following: Dresden and Leipzig (Germany), Nova Gorica (Slovenia), Volos, Xanthi and Halandri (Greece), Giulianova (Italy), Bydgoszcz and Sanok (Poland) and Kotel and Sofia (Bulgaria).

Following earlier research, the study used a questionnaire as the survey instrument. Survey questions were pre-tested in a pilot study conducted in the city of Volos, enabling fine-tuning of the instrument. The final questionnaire consists of seven parts. The first part outlines the objectives of the study and provides instructions and definitions to help respondents understand the rationale of the research and the questions. In the second part, semantic-differential questions are used to measure, in a scale ranged from zero to ten, people's perceptions with regard to existing UGS. The higher the score the higher the level of the GS characteristic is. The explored characteristics are: the availability of GS, its location, its accessibility, its quality, its frequency and efficiency of use, the costs to maintain it, and its impact on the urban economy overall. Part three explores similar issues but with reference to prospective UGS, while part four assesses views with regard to the *GreenKeys* project cities have developed. The fifth part examines attitudes towards green space and its provision, utilising Likert-type questions with scores ranging from zero (strongly disagree) to ten (strongly agree). Here three main aspects are assessed. The first is whether the municipality should be the prime actor responsible for the improvements of existing and the provision of additional urban green (as contrast to other tiers of government or the citizens themselves). The second is who should pay for the provision or improvement of green space: the city (e.g. through redistribution of the budget), all citizens, or only those people living closer to the urban green. The third is whether people would accept reduction of the green space in order this to be used for social (e.g. for a hospital) or for other uses. The sixth part

addresses willingness-to-pay for both improvement of existing and provision of additional green space, in terms of the percentage of income people would be happy to offer. To analyse this question answers were coded according to Table 1, indicating that the higher the figure the more amount of income people are willing to provide. The final part of the questionnaire gathers socioeconomic information of the respondents, such as age, gender and education.

Table 1

% of income for green space	
Nothing	1
less than 1‰	2
between 1‰ and 5‰	3
between 5‰ and 1%	4
between 1% and 2%	5
between 2% and 3%	6
between 3% and 5%	7
more than 5%	8

The final questionnaire was translated into six languages; the native languages spoken in the cities under study. Surveys were held during the second quarter of 2006 under the superintendence of the local partners. In each city the questionnaires were distributed to 50 individuals, which have a relative knowledge of issues regarding UGS (i.e. officials of local authorities, NGOs, business associations and organised groups of citizens). These individuals were able to have an 'informed' perspective or to represent different viewpoints concerning urban green space. Responses were collected, validated and double-checked by both the local partners that run the survey and the authors. Then they were coded and analysed in a descriptive manner.

3.2 Profile of the surveyed cities

The profile of the municipalities, in terms of the green space quantity they currently provide per thousand inhabitants, their recent population, their GDP per capita and the unemployment rate, is presented in the Table 2 below. It is evident that the green space differs substantially from one place to another. The per capita figures of urban green are much higher in Dresden and Sanok followed by Giulianova than in the Greek cities (Volos and Xanthi), where the situation is rather disappointing. While in Dresden there are about 398 square meters of urban green for a thousand inhabitants, the equivalent figures for Xanthi and Volos are only 2 and 6 square meters respectively.

Table 2

	Dresden	Sanok	Giulianova	Leipzig	Halandri	Kotel	Bydgoszcz	Sofia	Nova Gorica	Volos	Xanthi
green space (m^2/1000inh)	398	374	276	122	92	64	46	26	22	6	2
population	504635	41214	21955	502651	75327	7200	371200	1220000	20000	82439	47428
GDP pc (€)	29528	3065	15000	23488	11295	1569	4865	4058	11870	12323	11600
Unemployment rate	13,9	19,2	9,0	20,1	11,0	22,2	22,2	3,5	6,5	14,5	16,5

Source: Green Keys project data base

The largest municipalities participating in the Green Keys project, concerning population, are Sofia and Dresden, while the smallest ones are Kotel and Nova Gorica. Kotel, along with Bydgoszcz and Leipzig demonstrate the higher unemployment rates, probably still suffering from the great economic and social changes that occurred in these countries over the last 15 years. Similarly, Kotel and Bydgoszcz hold the lower GDP per capita, however Leipzig, in spite of the problem of unemployment, exhibits the second highest GDP per capita, after Dresden. It is worth mentioning the case of Sofia, which shows a considerably low GDP per capita (4058 € pc) and the lowest rate of unemployment (only 3,5%).

3.3 Profile of respondents

Before starting the analysis of the perceptions and attitudes towards GS, let us first describe the profile of the people participated in the survey (see Tables 3, 4, 5 and 6). According to the Table 2 the vast majority of the respondents belong to the '20 to 40' age group (46,15%), followed by those whose age is between 40 and 60 (37,87%). As regards the gender, the sample is almost equally divided between males and females (see Table 4).

Table 3

***GreenKeys* sample**	**Age (%)**
under 20	1,78
between 20 and 40	46,15
between 40 and 60	37,87
over 60	14,20

Table 4

***GreenKeys* sample**	**Gender (%)**
Male	47,8
Female	52,2

The sample is well educated. The vast majority of the people responded (79,46%) have received higher education, whereas 22,9% hold a postgraduate degree (Table 5). As far as occupation is concerned, the majority works in the public sector (47,06%), some in the private sector (37,47%) whereas the rest of the sample did not specified the sector of its employment (Table 6).

Table 5

GreenKeys sample	Education (%)
Primary	2,94
Secondary	17,61
Higher (technical)	25,44
Higher (university)	31,12
Postgraduate	22,90

Table 6

GreenKeys sample	Occupation (%)
Public sector	47,06
Private sector	37,47
n/s	15,47

3.4 Analysis of the whole sample of cities

Table 7 below uses average scores and standard deviations to describe people's perceptions towards various aspects of exiting or additionally-required UGS, as well as their attitudes towards provision and financing of it. Finally it gives an indication of the level of satisfaction people acquire living in their city. These are presented diagrammatically in Graph 1.

As can be observed, the sample seems to be discontented with the quantity and the condition of GS, since both scores are below 5 (4,1 and 4,8 respectively). Note that the score of 5 indicates medium levels in the GS aspects examined in the questionnaire. However, respondents believe that the existing GS is accessible enough, is widely visited and it advances economic development despite that it can be used more efficiently. As regards additional GS, it is clearly indicated that it is considered to be essential. It increases peoples welfare, attracts economic activities and reinforces economic development, although is exerts a pressure on property prices.

As discussed, UGS is regarded as a public good and therefore, it is less likely to be provided privately. On these grounds the onus is on the local authorities to ensure the adequate provision and maintenance of urban green. Given such a viewpoint, it is not surprising that people is less supportive of the idea that citizens should pay for GS, either directly or through taxation. In this context, it is interesting to note that people are particularly negative to the idea that only those living near the GS should pay for its provision or improvement. Turning to the issue of quantity versus quality of UGS, it seems that people maintain that local authorities should pay closer attention to the quality of green and should spend more money in improving existing green spaces than to provide additional ones.

As discussed, people believe that additional UGS is necessary. On these grounds they are generally reluctant to see reduction of the existing green, even when the released land is for accommodation of social uses (e.g. hospital, school, community centre, etc). Moreover, there seems to be willing to offer some money for the provision and improvement of UGS. This is (on average) between 1‰ and 5‰ of their income.

Table 7

		ALL CITIES	
		Mean	SD
	Green Space		
EXISTING	too much	**4,1**	2,0
EXISTING	too dispersed	**5,7**	2,0
EXISTING	very accessible	**6,7**	2,4
EXISTING	in very good condition	**4,8**	2,6
EXISTING	very cheep to maintain	**5,0**	2,1
EXISTING	widely visited	**6,7**	2,4
EXISTING	houses economic activities	**5,4**	2,3
EXISTING	be used more efficiently	**6,9**	2,8
EXISTING	advances economic development	**7,3**	2,2
ADDITIONAL	essential	**7,9**	2,5
ADDITIONAL	should be scattered	**5,4**	2,3
ADDITIONAL	cheap to provide	**5,2**	2,3
ADDITIONAL	increases welfare	**8,0**	2,3
ADDITIONAL	attracts economic activities	**7,1**	2,4
ADDITIONAL	changes land values	**7,7**	2,2
ADDITIONAL	reinforces economic development	**7,7**	2,1
STATEMENTS	city should improve existing	**8,2**	2,1
STATEMENTS	city should provide additional	**7,8**	2,5
STATEMENTS	improvement through taxation	**2,6**	3,0
STATEMENTS	provision through taxation	**2,5**	2,9
STATEMENTS	all citizens should pay	**3,4**	3,5
STATEMENTS	those live near should pay	**1,3**	2,4
STATEMENTS	GS be given to social uses	**3,9**	3,5
STATEMENTS	GS be given to profitable uses	**3,1**	3,3
	income to give for improvement	**2,5**	1,5
	income to give for provision	**2,6**	1,6
	Welfare indicators		
	happy with living in the city	**6,5**	2,4
	consider moving	**3,2**	3,3

Graph 1

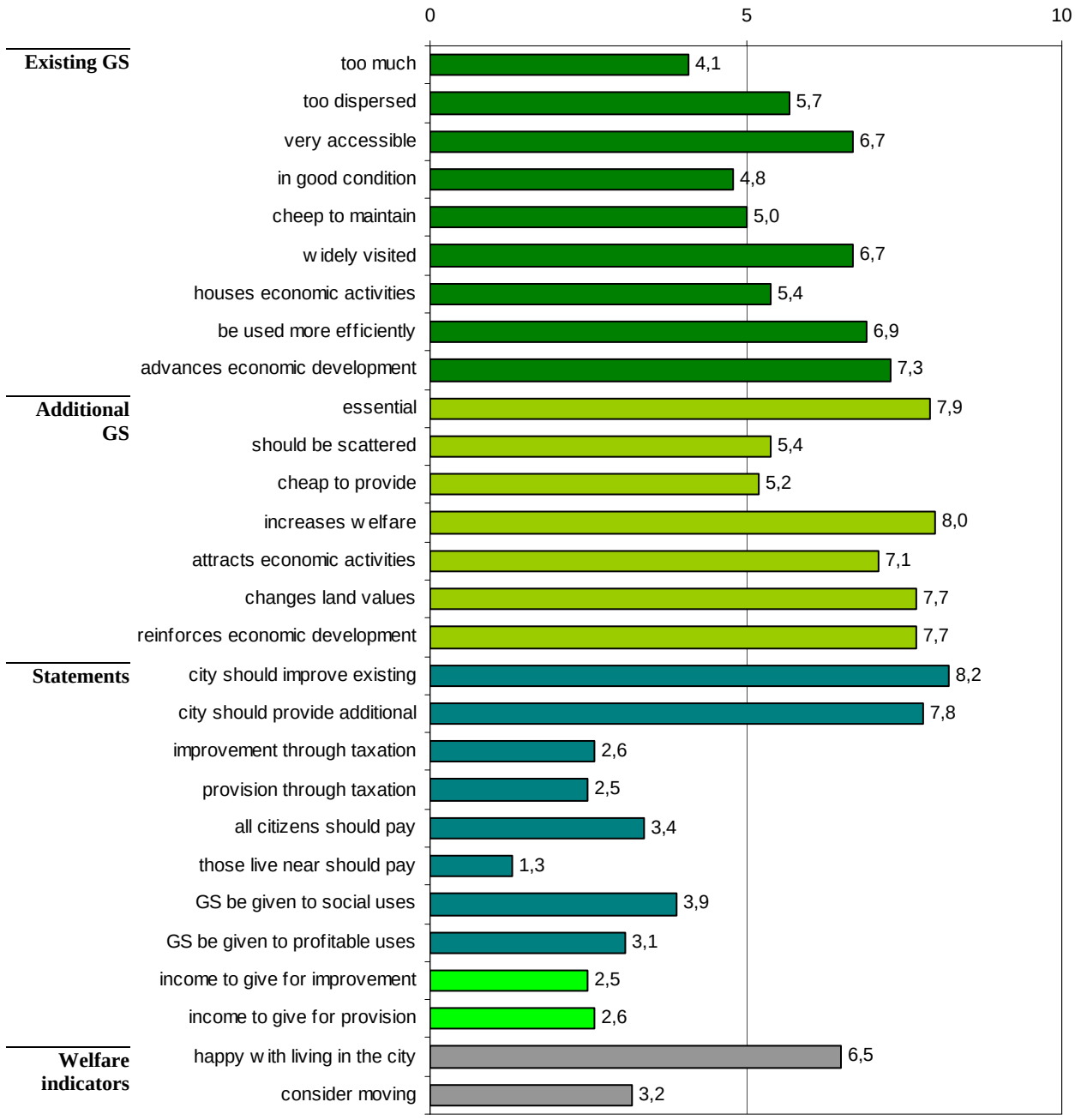


Table 8, presents peoples views on the projects co-funded by the *GreenKeys* programme. It is accepted that the pilot projects are essential for the cities (8,0), will be widely visited (7,9) and they would increase people's welfare (7,8). In addition, respondents think that the *GreenKeys* projects will attract economic activities (6,9) and will cause changes to land values (7,4).

Table 8

***GreenKeys* Projects**		**All cities** Mean	SD
	is essential	**8,0**	2,4
	will be visited	**7,9**	2,3
	would increase people's welfare	**7,8**	2,3
	will attract economic activities	**6,9**	2,4
	will cause changes to land values	**7,4**	2,3

3.5 Analysis for each city

This section describes each city's perceptions and attitudes towards UGS and compares them to the views and stances of the whole sample.

Table 9, presents the situation in Dresden (Germany). It can be observed that, although the city has the highest percentage of urban green per capita, people are less satisfied (compared with the whole sample) with the quantity of green available (the score is 3,8). This is because people visit to a great extent the urban green (7,7), they regard that the cost to maintain it is not very high. However, people are overall quite happy with their city and their living there.

Since there is quite a lot of GS in their city, respondents in Dresden regard that additional GS is less important (as compared to the whole sample), although it advances the quality of life in the city and the urban economy on the whole.

People in Dresden believe that the city should be held responsible for the improvement and provision of UGS, and on these grounds they are very reluctant (compared to the whole sample) to contribute financially towards this end. Although they generally object the development of green space land, either for profitable or social uses, there seems to be more open towards the latter (as compared to the whole sample).

As concerns the *GreenKeys* project (Table 10), people are quite sceptical about its necessity and value. Although they see that it will be visited and will improve both people's welfare and the economic activity in the area, they are less enthusiastic about its impact in comparison to the whole sample.

Table 9

		ALL		Dresden	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**3,8**	1,4
	too dispersed	**5,7**	2,0	**5,8**	1,6
	very accessible	**6,7**	2,4	**6,8**	1,8
	in good condition	**4,8**	2,6	**5,8**	1,9
	cheep to maintain	**5,0**	2,1	**4,8**	1,2
	widely visited	**6,7**	2,4	**7,7**	1,5
	be used more efficiently	**6,9**	2,8	**4,7**	2,8
	advances economic development	**7,3**	2,2	**7,2**	2,0
ADDITIONAL	essential	**7,9**	2,5	**6,7**	2,7
	should be scattered	**5,4**	2,3	**4,3**	2,7
	cheap to provide	**5,2**	2,3	**5,7**	1,9
	increases welfare	**8,0**	2,3	**7,5**	2,5
	attracts economic activities	**7,1**	2,4	**6,5**	2,1
	changes land values	**7,7**	2,2	**7,2**	2,4
	reinforces economic development	**7,7**	2,1	**7,0**	2,2
STATEMENTS	city should improve existing	**8,2**	2,1	**7,4**	2,4
	city should provide additional	**7,8**	2,5	**6,7**	2,8
	improvement through taxation	**2,6**	3,0	**1,8**	2,7
	provision through taxation	**2,5**	2,9	**1,6**	2,5
	all citizens should pay	**3,4**	3,5	**2,1**	3,0
	those live near should pay	**1,3**	2,4	**0,9**	2,1
	GS be given to social uses	**3,9**	3,5	**4,2**	3,0
	GS be given to profitable uses	**3,1**	3,3	**2,6**	2,7
	income to give for improvement	**2,5**	1,5	**2,4**	1,4
	income to give for provision	**2,6**	1,6	**2,2**	1,3
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**8,3**	1,2
	consider moving	**3,2**	3,3	**3,2**	3,0

Table 10

	ALL		Dresden	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**5,9**	2,6
will be visited	**7,9**	2,3	**6,7**	2,2
would increase people's welfare	**7,8**	2,3	**5,4**	2,5
will attract economic activities	**6,9**	2,4	**6,0**	1,7
will cause changes to land values	**7,4**	2,3	**6,0**	2,0

Table 11 summarises Leipzig's perceptions and attitudes towards UGS. Similarly to Dresden people in Leipzig reckon that there is not enough urban green in their city, though people visit parks and UGS to a great extent. Moreover, and in contrast to Dresden, Leipzig regards that its green is not in good condition. Although it is maintained that additional urban green will have a positive effect on people's welfare and on the overall economy of the city, the fact that Leipzig looses population and has quite a lot of urban green

available, prompts people to answer that additional UGS (on its own) will not attract economic activities. It is perhaps on these grounds that demands for additional green are mitigated in Leipzig (as compared to the whole sample).

Table 11

		ALL		Leipzig	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**3,8**	1,9
	too dispersed	**5,7**	2,0	**5,5**	1,6
	very accessible	**6,7**	2,4	**6,7**	2,1
	in good condition	**4,8**	2,6	**3,9**	2,6
	cheep to maintain	**5,0**	2,1	**4,5**	2,6
	widely visited	**6,7**	2,4	**8,2**	2,1
	be used more efficiently	**6,9**	2,8	**6,6**	3,6
	advances economic development	**7,3**	2,2	**7,4**	3,0
ADDITIONAL	essential	**7,9**	2,5	**6,5**	3,7
	should be scattered	**5,4**	2,3	**6,6**	3,0
	cheap to provide	**5,2**	2,3	**4,8**	2,3
	increases welfare	**8,0**	2,3	**9,3**	1,7
	attracts economic activities	**7,1**	2,4	**4,6**	4,0
	changes land values	**7,7**	2,2	**8,5**	2,7
	reinforces economic development	**7,7**	2,1	**8,4**	2,3
STATEMENTS	city should improve existing	**8,2**	2,1	**8,7**	2,2
	city should provide additional	**7,8**	2,5	**8,0**	2,8
	improvement through taxation	**2,6**	3,0	**2,1**	2,8
	provision through taxation	**2,5**	2,9	**1,7**	2,5
	all citizens should pay	**3,4**	3,5	**1,9**	2,6
	those live near should pay	**1,3**	2,4	**0,3**	1,0
	GS be given to social uses	**3,9**	3,5	**6,4**	3,8
	GS be given to profitable uses	**3,1**	3,3	**4,6**	3,6
	income to give for improvement	**2,5**	1,5	**2,2**	1,3
	income to give for provision	**2,6**	1,6	**2,0**	1,2
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**7,5**	1,9
	consider moving	**3,2**	3,3	**1,0**	2,4

In broad lines, the people of Leipzig seem to have similar views towards UGS provision with the people in Dresden. They maintain that the city is the main actor responsible for the improvement and provision of UGS, and on these grounds they are very reluctant (compared to the whole sample) to contribute financially towards this end. In contrast to Dresden, however, they are more open towards alternative uses of UGS, though there is high divergence of opinion (evident in high figures of standard deviation). In general we can accept that people in Leipzig would not object the idea UGS to be given to social or even to profitable uses when appropriate.

Finally, the welfare indicators show a tendency similar to this in Dresden; people are quite happy living in the city and *ceteris paribus* they would not consider moving.

As concerns Leipzig's *GreenKeys* project (Table 12), certain similarities to Dresden are apparent. Respondents regard that it will improve people's welfare and quality of life in general, but its overall value is under question. It is not expected to attract economic activities, it will not be visited to a great extent and it will change substantially the land values around it.

Table 12

	ALL		**Leipzig**	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**6,5**	4,2
will be visited	**7,9**	2,3	**6,6**	4,4
would increase people's welfare	**7,8**	2,3	**9,4**	1,8
will attract economic activities	**6,9**	2,4	**4,0**	4,1
will cause changes to land values	**7,4**	2,3	**8,9**	2,2

The views of people of Bydgoszcz (Poland) are presented in Table 13. As becomes evident, they regard that UGS are in good condition and attract many visitors, enjoying good accessibility. However, they are not enough. Additional urban green is required as it increases welfare, attracts economic activities and supports urban economic development. The onus to provide and improve the urban green is on local authorities, but respondents are not particularly negative to the idea this to be financed by taxation or directly though people's donations. Less negative are to the proposition urban green to be given to other, social or profitable, uses under certain conditions.

Turning to its *GreenKeys* project (Table 14), respondents are not convinced it will increase inhabitants' welfare and on this basis they do not see it as essential for the city.

Table 13

		ALL		Bydgoszcz	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**3,5**	1,5
	too dispersed	**5,7**	2,0	**5,4**	1,5
	very accessible	**6,7**	2,4	**7,7**	1,7
	in good condition	**4,8**	2,6	**6,5**	1,9
	cheep to maintain	**5,0**	2,1	**5,1**	1,9
	widely visited	**6,7**	2,4	**7,9**	1,5
	be used more efficiently	**6,9**	2,8	**6,6**	2,3
	advances economic development	**7,3**	2,2	**6,6**	1,5
ADDITIONAL	essential	**7,9**	2,5	**7,4**	1,5
	should be scattered	**5,4**	2,3	**6,2**	3,2
	cheap to provide	**5,2**	2,3	**4,9**	1,8
	increases welfare	**8,0**	2,3	**6,5**	1,7
	attracts economic activities	**7,1**	2,4	**7,2**	1,5
	changes land values	**7,7**	2,2	**7,4**	1,8
	reinforces economic development	**7,7**	2,1	**7,3**	2,0
STATEMENTS	city should improve existing	**8,2**	2,1	**9,0**	1,5
	city should provide additional	**7,8**	2,5	**8,6**	1,8
	improvement through taxation	**2,6**	3,0	**3,4**	3,0
	provision through taxation	**2,5**	2,9	**3,5**	3,1
	all citizens should pay	**3,4**	3,5	**6,9**	3,4
	those live near should pay	**1,3**	2,4	**1,3**	1,7
	GS be given to social uses	**3,9**	3,5	**4,8**	2,9
	GS be given to profitable uses	**3,1**	3,3	**4,2**	3,1
	income to give for improvement	**2,5**	1,5	**2,7**	1,4
	income to give for provision	**2,6**	1,6	**3,0**	1,8
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**5,8**	2,0
	consider moving	**3,2**	3,3	**3,7**	3,2

Table 14

	ALL		Bydgoszcz	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**7,5**	2,0
will be visited	**7,9**	2,3	**8,1**	1,5
would increase people's welfare	**7,8**	2,3	**6,2**	2,2
will attract economic activities	**6,9**	2,4	**6,9**	1,8
will cause changes to land values	**7,4**	2,3	**7,2**	2,3

Table 15 presents the views of people of Sanok, the other Polish city participating in *GreenKeys*. As can be seen they are not satisfied with both the quantity and the quality of UGS. They regard that existing green is not used efficiently enough and therefore it does not advance economic development to the degree it could do so. On these grounds, although they require additional green space, they stress the need for quality in order GS to attract economic activities and to reinforce the urban economy. Similarly to the whole sample, people in Sanok maintain that it is the local authorities who are mainly accountable for the UGS and

therefore they are not particularly keen to support its improvement or provision, either through taxation or by their own resources. Since urban green is not used efficiently enough, they would not object the idea it to be given, under certain conditions, to other, more efficient, uses (social or profitable).

Table 15

		ALL		Sanok	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**3,6**	2,3
	too dispersed	**5,7**	2,0	**5,5**	2,1
	very accessible	**6,7**	2,4	**5,7**	2,7
	in good condition	**4,8**	2,6	**3,2**	2,5
	cheep to maintain	**5,0**	2,1	**4,7**	2,6
	widely visited	**6,7**	2,4	**5,7**	2,7
	be used more efficiently	**6,9**	2,8	**8,5**	2,0
	advances economic development	**7,3**	2,2	**6,5**	2,4
ADDITIONAL	essential	**7,9**	2,5	**8,0**	2,6
	should be scattered	**5,4**	2,3	**7,0**	3,5
	cheap to provide	**5,2**	2,3	**5,4**	2,3
	increases welfare	**8,0**	2,3	**6,5**	2,6
	attracts economic activities	**7,1**	2,4	**6,7**	2,2
	changes land values	**7,7**	2,2	**6,9**	2,8
	reinforces economic development	**7,7**	2,1	**7,2**	2,4
STATEMENTS	city should improve existing	**8,2**	2,1	**7,8**	2,7
	city should provide additional	**7,8**	2,5	**7,1**	3,0
	improvement through taxation	**2,6**	3,0	**2,3**	3,0
	provision through taxation	**2,5**	2,9	**2,4**	3,3
	all citizens should pay	**3,4**	3,5	**3,3**	3,6
	those live near should pay	**1,3**	2,4	**0,9**	1,9
	GS be given to social uses	**3,9**	3,5	**4,4**	3,5
	GS be given to profitable uses	**3,1**	3,3	**5,6**	3,7
	income to give for improvement	**2,5**	1,5	**2,3**	1,2
	income to give for provision	**2,6**	1,6	**2,6**	1,4
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**5,7**	2,3
	consider moving	**3,2**	3,3	**4,2**	3,5

As regards the *GreenKeys* project in Sanok, respondents believe it is essential for the city as it will attract both economic activities and visitors. However, changes in land values around it are also expected.

Table 16

	ALL		Sanok	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**8,2**	2,2
will be visited	**7,9**	2,3	**8,4**	2,0
would increase people's welfare	**7,8**	2,3	**6,4**	2,4
will attract economic activities	**6,9**	2,4	**7,0**	2,0
will cause changes to land values	**7,4**	2,3	**7,3**	2,3

Respondents from the city of Nova Gorica in Slovenia reckon that existing quantity of urban green is about OK, it is in good quality and very accessible (see Table 17). GS in the city advance economic development but they can be used more efficiently. Additional UGS is required and it should be scattered around the city. This will increase people's welfare and it would attract economic activities reinforcing the economy of the city. In contrast to Polish cities, respondents in Nova Gorica recognise the it is not only local authorities who should be held responsible for the provision and improvement of urban green and, on these grounds, they are prepared to pay some extra taxes or to contribute directly towards this end. Interestingly, respondents in Nova Gorica are open to the idea GS to be given to social uses when this is necessary, but reluctant to release such land for profitable uses.

Table 18 presents Nova Gorica's views on the scheme the *GreenKeys* project is to impalement. It is believed that this is a necessary project because it will increase substantially people's welfare and will attract economic activities in the area; though it will also cause changes in the land values around it.

Table 17

		ALL		Nova Gorica	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**4,7**	2,4
	too dispersed	**5,7**	2,0	**6,1**	1,9
	very accessible	**6,7**	2,4	**7,1**	2,5
	in good condition	**4,8**	2,6	**6,2**	2,2
	cheep to maintain	**5,0**	2,1	**5,1**	1,9
	widely visited	**6,7**	2,4	**6,4**	2,2
	be used more efficiently	**6,9**	2,8	**7,1**	2,5
	advances economic development	**7,3**	2,2	**7,2**	1,8
ADDITIONAL	essential	**7,9**	2,5	**7,1**	2,8
	should be scattered	**5,4**	2,3	**7,0**	2,6
	cheap to provide	**5,2**	2,3	**5,8**	1,9
	increases welfare	**8,0**	2,3	**8,0**	2,4
	attracts economic activities	**7,1**	2,4	**6,7**	2,5
	changes land values	**7,7**	2,2	**7,4**	2,3
	reinforces economic development	**7,7**	2,1	**6,9**	2,4
STATEMENTS	city should improve existing	**8,2**	2,1	**7,6**	2,0
	city should provide additional	**7,8**	2,5	**6,8**	2,4
	improvement through taxation	**2,6**	3,0	**3,8**	3,2
	provision through taxation	**2,5**	2,9	**3,2**	3,0
	all citizens should pay	**3,4**	3,5	**3,3**	3,4
	those live near should pay	**1,3**	2,4	**1,4**	2,1
	GS be given to social uses	**3,9**	3,5	**4,0**	3,4
	GS be given to profitable uses	**3,1**	3,3	**2,7**	3,0
	income to give for improvement	**2,5**	1,5	**2,1**	1,3
	income to give for provision	**2,6**	1,6	**2,0**	1,4
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**6,2**	2,4
	consider moving	**3,2**	3,3	**2,5**	3,0

Table 18

	ALL		Nova Gorica	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**7,8**	2,2
will be visited	**7,9**	2,3	**7,7**	2,1
would increase people's welfare	**7,8**	2,3	**8,2**	1,9
will attract economic activities	**6,9**	2,4	**6,8**	2,2
will cause changes to land values	**7,4**	2,3	**7,0**	2,1

The city of Guilianova is the only Italian city participating in *GreenKeys*. As can be observed in Table 19, respondents are not satisfied with both the quantity and the quality of UGS. Accessibility and visitability of the urban green is OK, but they reckon that these spaces can be used more efficiently. Additional GS is required (as it will increase people's welfare and attract economic activities to the betterment of the urban economy on the whole) but these should be scattered all over the city.

Regarding statements about green space, it is worth highlighting that respondents are not willing to contribute (either indirectly, through taxation, or directly, by donating money) towards the improvement or provision of UGS, and that they are negative to the idea GS to be given to other social or profitable uses.

Table 19

		ALL		Guilianova	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**4,3**	1,6
	too dispersed	**5,7**	2,0	**5,5**	1,6
	very accessible	**6,7**	2,4	**4,9**	2,2
	in good condition	**4,8**	2,6	**4,1**	1,7
	cheep to maintain	**5,0**	2,1	**4,9**	2,0
	widely visited	**6,7**	2,4	**5,4**	2,0
	be used more efficiently	**6,9**	2,8	**7,4**	1,5
	advances economic development	**7,3**	2,2	**7,3**	1,9
ADDITIONAL	essential	**7,9**	2,5	**7,5**	1,7
	should be scattered	**5,4**	2,3	**6,6**	2,5
	cheap to provide	**5,2**	2,3	**5,1**	2,3
	increases welfare	**8,0**	2,3	**7,6**	2,2
	attracts economic activities	**7,1**	2,4	**6,9**	1,9
	changes land values	**7,7**	2,2	**7,3**	1,5
	reinforces economic development	**7,7**	2,1	**7,5**	1,4
STATEMENTS	city should improve existing	**8,2**	2,1	**7,1**	1,9
	city should provide additional	**7,8**	2,5	**6,9**	2,1
	improvement through taxation	**2,6**	3,0	**1,8**	2,4
	provision through taxation	**2,5**	2,9	**1,7**	2,4
	all citizens should pay	**3,4**	3,5	**1,8**	2,6
	those live near should pay	**1,3**	2,4	**0,6**	1,2
	GS be given to social uses	**3,9**	3,5	**2,5**	2,5
	GS be given to profitable uses	**3,1**	3,3	**2,4**	2,7
	income to give for improvement	**2,5**	1,5	**2,6**	1,2
	income to give for provision	**2,6**	1,6	**2,5**	1,3
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**6,1**	2,7
	consider moving	**3,2**	3,3	**2,6**	3,1

As far as Guilianova's *GreenKeys* project is concerned (Table 20), respondents believe it is necessary, it will be visited, it will improve people's welfare and it will attract economic activities, but to a lesser degree compared to the whole sample.

Table 20

	ALL		Guilianova	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**7,5**	1,8
will be visited	**7,9**	2,3	**6,9**	2,2
would increase people's welfare	**7,8**	2,3	**7,7**	1,7
will attract economic activities	**6,9**	2,4	**6,7**	1,8
will cause changes to land values	**7,4**	2,3	**7,1**	1,7

Halandri is a municipality located in the wider Athens agglomeration in Greece. Respondents of the survey feel that the GS of the municipality are about enough in terms of quantity (Table 21). They are also well accessible, frequently visited and in good condition. Moreover, they reckon that some of them can be used more efficiently but in general they advance urban economic development. Despite these, Halandri requires additional green, as respondents believe that it will increase substantially residents' welfare and quality of life, it will attract economic activities in the area and it will enhance the economic position of the municipality. A negative side-effect of this is probably some significant changes in the adjacent land prices. Turning to the statements about the UGS provision and maintenance, respondents highlight the important role the local authorities have to play towards this end. However, they feel quite comfortable with the idea them to contribute towards provision and improvement of green by offering a small part of their income or by incurring some additional taxes. Since land values are high in the municipality, respondents would discuss the proposition urban green to be given to social uses when this is necessary, but they reject release of green to profitable uses.

As concerns the *GreenKeys* project, people of Halandri believe it is essential. It will improve quality of life, it will attract economic activities and visitors, but it will change substantially the land values in the area (see Table 22).

Table 21

		ALL		Halandri	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**5,5**	1,9
	too dispersed	**5,7**	2,0	**6,4**	2,0
	very accessible	**6,7**	2,4	**7,7**	1,9
	in good condition	**4,8**	2,6	**6,5**	1,9
	cheep to maintain	**5,0**	2,1	**5,8**	1,5
	widely visited	**6,7**	2,4	**7,7**	1,7
	be used more efficiently	**6,9**	2,8	**5,7**	2,9
	advances economic development	**7,3**	2,2	**7,9**	2,0
ADDITIONAL	essential	**7,9**	2,5	**8,7**	1,8
	should be scattered	**5,4**	2,3	**5,4**	3,5
	cheap to provide	**5,2**	2,3	**4,5**	2,5
	increases welfare	**8,0**	2,3	**9,1**	1,4
	attracts economic activities	**7,1**	2,4	**7,8**	1,7
	changes land values	**7,7**	2,2	**8,5**	1,8
	reinforces economic development	**7,7**	2,1	**8,2**	1,6
STATEMENTS	city should improve existing	**8,2**	2,1	**8,6**	1,7
	city should provide additional	**7,8**	2,5	**8,5**	1,8
	improvement through taxation	**2,6**	3,0	**3,4**	3,0
	provision through taxation	**2,5**	2,9	**3,3**	2,7
	all citizens should pay	**3,4**	3,5	**4,2**	3,5
	those live near should pay	**1,3**	2,4	**2,2**	3,4
	GS be given to social uses	**3,9**	3,5	**4,3**	3,7
	GS be given to profitable uses	**3,1**	3,3	**1,7**	2,5
	income to give for improvement	**2,5**	1,5	**2,6**	1,5
	income to give for provision	**2,6**	1,6	**2,8**	1,8
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**7,5**	1,6
	consider moving	**3,2**	3,3	**3,6**	3,1

Table 22

	ALL		Halandri	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**8,7**	1,4
will be visited	**7,9**	2,3	**8,8**	1,4
would increase people's welfare	**7,8**	2,3	**9,1**	1,1
will attract economic activities	**6,9**	2,4	**7,8**	1,6
will cause changes to land values	**7,4**	2,3	**8,3**	1,9

Turning to the city of Volos, a place with minimal GS compared to the other cities examined by this study, we see (Table 23) that people recognise the lack of green and its inefficient management, reflected in its medium quality, visitability and accessibility. They reckon that UGS attracts economic activities and support the city's path toward economic development, and it is paramount for the quality of life in the city and the welfare of the people. Overall, what becomes evident is that more green space is absolutely essential. The

city should take the lead role to this, but respondents regard that people may contribute to it either directly or indirectly. GS can be given to social uses if this is necessary but not to profitable ones.

Table 23

		ALL		Volos	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**3,7**	1,9
	too dispersed	**5,7**	2,0	**5,8**	2,8
	very accessible	**6,7**	2,4	**6,5**	2,6
	in good condition	**4,8**	2,6	**5,0**	2,4
	cheep to maintain	**5,0**	2,1	**5,1**	2,3
	widely visited	**6,7**	2,4	**5,9**	2,5
	be used more efficiently	**6,9**	2,8	**7,2**	2,5
	advances economic development	**7,3**	2,2	**7,2**	2,2
ADDITIONAL	essential	**7,9**	2,5	**9,0**	1,3
	should be scattered	**5,4**	2,3	**7,2**	3,1
	cheap to provide	**5,2**	2,3	**6,2**	2,2
	increases welfare	**8,0**	2,3	**8,3**	1,8
	attracts economic activities	**7,1**	2,4	**8,0**	1,8
	changes land values	**7,7**	2,2	**8,4**	1,6
	reinforces economic development	**7,7**	2,1	**8,2**	1,9
STATEMENTS	city should improve existing	**8,2**	2,1	**8,7**	1,8
	city should provide additional	**7,8**	2,5	**8,8**	1,6
	improvement through taxation	**2,6**	3,0	**2,3**	2,7
	provision through taxation	**2,5**	2,9	**2,4**	2,8
	all citizens should pay	**3,4**	3,5	**3,8**	3,4
	those live near should pay	**1,3**	2,4	**2,5**	3,2
	GS be given to social uses	**3,9**	3,5	**4,5**	3,6
	GS be given to profitable uses	**3,1**	3,3	**2,6**	3,1
	income to give for improvement	**2,5**	1,5	**2,6**	1,8
	income to give for provision	**2,6**	1,6	**3,1**	2,2
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**6,0**	2,1
	consider moving	**3,2**	3,3	**3,3**	3,5

Volos's *GreenKeys* project is seen as essential for the area. It will be visited a lot, it will improve residents' quality of life, and it will attract economic activities, though it will also cause increase in land values around it.

Table 24

	ALL		Volos	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**8,7**	1,4
will be visited	**7,9**	2,3	**8,0**	1,8
would increase people's welfare	**7,8**	2,3	**8,0**	2,1
will attract economic activities	**6,9**	2,4	**8,1**	1,7
will cause changes to land values	**7,4**	2,3	**8,3**	1,7

Table 25, provides the perceptions and attitudes towards GS held by the people of Xanthi (Greece). Interestingly it seems that respondents have the impression that Xanthi's urban green is of medium quantity, quality, accessibility and visitability. This is a bit odd, given that Xanthi is the city with the least green space per capita, as compared to the other *GreenKeys* cities. As expected, the existing GS of the city advances economic development but it should be used more efficiently. Additional green is essential and this should be scattered all over the city. It is expected to increase quality of life and, by attracting economic activities, to enhance the economy of the city.

Given the lack of urban green, respondents are keen to support financially its improvement and provision (Table 25). This however does not mean that local authorities can evade responsibility. The onus to provide and improve the urban green is on them. Although release of green for profitable uses is not an option, respondents would accept it to be given for social uses, when this is necessary.

As becomes evident from Table 26, Xanthi's people are very positive on the *GreenKeys* project. Its impact on peoples' welfare and on the economy of the area is deemed to be high, and despite changes in land values it will cause, respondents regard it is really essential for the city.

Table 25

		ALL		Xanthi	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**4,8**	2,1
	too dispersed	**5,7**	2,0	**5,8**	2,3
	very accessible	**6,7**	2,4	**6,8**	2,4
	in good condition	**4,8**	2,6	**4,8**	2,1
	cheep to maintain	**5,0**	2,1	**5,4**	2,7
	widely visited	**6,7**	2,4	**5,4**	2,4
	be used more efficiently	**6,9**	2,8	**6,9**	2,8
	advances economic development	**7,3**	2,2	**8,0**	1,7
ADDITIONAL	essential	**7,9**	2,5	**9,1**	1,3
	should be scattered	**5,4**	2,3	**6,8**	3,4
	cheap to provide	**5,2**	2,3	**4,7**	2,5
	increases welfare	**8,0**	2,3	**8,1**	2,4
	attracts economic activities	**7,1**	2,4	**7,9**	1,9
	changes land values	**7,7**	2,2	**8,6**	1,5
	reinforces economic development	**7,7**	2,1	**8,3**	2,0
STATEMENTS	city should improve existing	**8,2**	2,1	**8,1**	2,5
	city should provide additional	**7,8**	2,5	**8,2**	2,5
	improvement through taxation	**2,6**	3,0	**2,7**	2,9
	provision through taxation	**2,5**	2,9	**3,3**	3,4
	all citizens should pay	**3,4**	3,5	**4,4**	3,5
	those live near should pay	**1,3**	2,4	**3,0**	3,4
	GS be given to social uses	**3,9**	3,5	**3,4**	3,8
	GS be given to profitable uses	**3,1**	3,3	**1,9**	2,8
	income to give for improvement	**2,5**	1,5	**2,7**	1,4
	income to give for provision	**2,6**	1,6	**3,3**	1,7
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**5,6**	2,2
	consider moving	**3,2**	3,3	**3,7**	3,1

Table 26

	ALL		Xanthi	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**9,1**	1,5
will be visited	**7,9**	2,3	**8,5**	1,5
would increase people's welfare	**7,8**	2,3	**8,3**	1,9
will attract economic activities	**6,9**	2,4	**8,1**	2,0
will cause changes to land values	**7,4**	2,3	**8,1**	2,4

Table 27 presents the results from the city of Kotel (Bulgaria). In this case too, the citizens's response is quite close to the average scores of the whole sample, though there are certain deviations worthwhile to be mentioned. In comparison to the other *GreenKeys* cities, Kotel seems to be a bit more satisfied with regard to the quantity, the conditions and the accessibility of existing green space. Respondents agree that it advances economic development, though it can be used more efficiently. Additional green is required. This has to be placed all over the city. Respondents of Kotel reckon that UGS increase welfare and support

economic activities to flourish, but to a lesser extent that respondents of the other cities do. They hold local authorities responsible for the provision and improvement of UGS, and they are not too negative to the idea of UG provision and improvement to be supported financially through taxation and direct payments made by the citizens. Interestingly, people in Kotel are not particularly critical to the idea GS to be given to profitable uses. Moreover, and in contrast to the whole sample, Kotel's people are not very happy with their city and would consider moving if conditions allow.

Table 27

		ALL		Kotel	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**5,0**	1,2
	too dispersed	**5,7**	2,0	**4,9**	1,3
	very accessible	**6,7**	2,4	**8,5**	1,7
	in good condition	**4,8**	2,6	**5,5**	2,6
	cheep to maintain	**5,0**	2,1	**4,8**	1,3
	widely visited	**6,7**	2,4	**7,2**	2,2
	be used more efficiently	**6,9**	2,8	**7,3**	2,5
	advances economic development	**7,3**	2,2	**7,8**	2,2
ADDITIONAL	essential	**7,9**	2,5	**7,8**	2,5
	should be scattered	**5,4**	2,3	**7,5**	2,0
	cheap to provide	**5,2**	2,3	**5,3**	2,0
	increases welfare	**8,0**	2,3	**7,3**	2,6
	attracts economic activities	**7,1**	2,4	**6,8**	2,0
	changes land values	**7,7**	2,2	**6,8**	2,2
	reinforces economic development	**7,7**	2,1	**7,4**	1,7
STATEMENTS	city should improve existing	**8,2**	2,1	**8,1**	2,0
	city should provide additional	**7,8**	2,5	**7,4**	2,8
	improvement through taxation	**2,6**	3,0	**3,0**	3,4
	provision through taxation	**2,5**	2,9	**2,7**	3,1
	all citizens should pay	**3,4**	3,5	**3,9**	3,5
	those live near should pay	**1,3**	2,4	**0,9**	1,9
	GS be given to social uses	**3,9**	3,5	**2,8**	2,9
	GS be given to profitable uses	**3,1**	3,3	**4,2**	3,3
	income to give for improvement	**2,5**	1,5	**2,5**	1,5
	income to give for provision	**2,6**	1,6	**2,5**	1,6
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**4,5**	3,1
	consider moving	**3,2**	3,3	**6,0**	2,8

In terms of Kotel's *GreenKeys* project (Table 28), the inhabitants recognise its necessity; they think it will be visited a lot and that it will increase welfare and it will attract economic activities.

Table 28

	ALL		Kotel	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**8,3**	1,8
will be visited	**7,9**	2,3	**8,0**	1,8
would increase people's welfare	**7,8**	2,3	**7,4**	2,2
will attract economic activities	**6,9**	2,4	**6,6**	1,9
will cause changes to land values	**7,4**	2,3	**6,4**	2,0

The city of Sofia is the largest city under survey and constitutes the capital of Bulgaria. In terms of the existing green space, the citizens appear to be dissatisfied with the quantity and quality of existing green space, especially in comparison to the whole sample (see Table 29). On these grounds, they maintain that the city's urban green should be used more efficiently and additional green space should be provided all over the city. This will increase residents' welfare, attract economic activities and promote urban economic development. Although the city should take the lead role in the provision and improvement of UGS without burdening the inhabitants with additional taxation, respondents are happy to contribute financially towards this end. Since lack of urban green is recognised, respondents do not accept reduction of it, even if its development is to accommodate social needs.

Sofia's GreenKeys project is regarded as absolutely essential for the city. It will be extensively visited, it will improve the quality of people's life and their welfare and it will attract economic activities in the area, without putting too much pressure on the adjacent land values (Table 30)

Table 29

		ALL		Sofia	
		Mean	SD	Mean	SD
	Green Space				
EXISTING	too much	**4,1**	2,0	**2,7**	2,3
EXISTING	too dispersed	**5,7**	2,0	**6,3**	2,6
EXISTING	very accessible	**6,7**	2,4	**6,0**	2,8
EXISTING	in good condition	**4,8**	2,6	**1,6**	1,9
EXISTING	cheep to maintain	**5,0**	2,1	**4,7**	2,7
EXISTING	widely visited	**6,7**	2,4	**6,4**	2,9
EXISTING	be used more efficiently	**6,9**	2,8	**8,3**	2,7
EXISTING	advances economic development	**7,3**	2,2	**7,7**	2,9
ADDITIONAL	essential	**7,9**	2,5	**9,8**	0,7
ADDITIONAL	should be scattered	**5,4**	2,3	**8,2**	3,1
ADDITIONAL	cheap to provide	**5,2**	2,3	**4,9**	2,9
ADDITIONAL	increases welfare	**8,0**	2,3	**9,3**	1,2
ADDITIONAL	attracts economic activities	**7,1**	2,4	**8,4**	1,8
ADDITIONAL	changes land values	**7,7**	2,2	**8,2**	1,8
ADDITIONAL	reinforces economic development	**7,7**	2,1	**8,4**	1,9
STATEMENTS	city should improve existing	**8,2**	2,1	**9,6**	0,9
STATEMENTS	city should provide additional	**7,8**	2,5	**9,2**	1,5
STATEMENTS	improvement through taxation	**2,6**	3,0	**2,7**	3,2
STATEMENTS	provision through taxation	**2,5**	2,9	**2,1**	2,6
STATEMENTS	all citizens should pay	**3,4**	3,5	**2,9**	3,5
STATEMENTS	those live near should pay	**1,3**	2,4	**1,0**	2,3
STATEMENTS	GS be given to social uses	**3,9**	3,5	**1,7**	2,7
STATEMENTS	GS be given to profitable uses	**3,1**	3,3	**1,4**	3,0
	income to give for improvement	**2,5**	1,5	**2,9**	1,9
	income to give for provision	**2,6**	1,6	**2,6**	1,6
	Welfare indicators				
	happy with living in the city	**6,5**	2,4	**7,2**	2,7
	consider moving	**3,2**	3,3	**2,4**	3,1

Table 30

	ALL		Sofia	
***GreenKeys* Project**	Mean	SD	Mean	SD
is essential	**8,0**	2,4	**9,8**	0,6
will be visited	**7,9**	2,3	**9,5**	1,1
would increase people's welfare	**7,8**	2,3	**9,4**	1,1
will attract economic activities	**6,9**	2,4	**8,0**	2,1
will cause changes to land values	**7,4**	2,3	**6,8**	2,6

3.6 Comparative analysis

A more concise picture of the GS perceptions and attitudes in each *GreenKeys* city is provided in Table 31 below. This Table displays all the answers of the 11 *GreenKeys* cities, highlighting with blue colour the lowest scores and with red the highest score for every UGS aspects examined by this research.

As can be observed, people from Sofia are the least content (2,7) with the quantity of existing green space, while people from Halandri are the most satisfied (5,5). Indeed, existing urban green per inhabitant in Halandri is about three and a half times higher compared to this of Sofia. However the former is well below the average green that is availed in Dresden, Sanok and Guilianova. This, perhaps, implies that the citizens of Halandri are content with their green space because they compared themselves with the other Greek cities where the situation is much worse.

Table 31

		ALL	Dresden	Sanok	Guilianova	Leipzig	Halandri	Kotel	Bydgoszcz	Sofia	Nova Gorica	Volos	Xanthi
	Green Space												
EXISTING	too much	**4,1**	3,8	3,6	4,3	3,8	**5,5**	5	3,5	**2,7**	4,7	3,7	4,8
EXISTING	too dispersed	**5,7**	5,8	5,5	5,5	5,5	**6,4**	**4,9**	5,4	6,3	6,1	5,8	5,8
EXISTING	very accessible	**6,7**	6,8	5,7	**4,9**	6,7	7,7	**8,5**	7,7	6	7,1	6,5	6,8
EXISTING	in good condition	**4,8**	5,8	3,2	4,1	3,9	**6,5**	5,5	**6,5**	**1,6**	6,2	5	4,8
EXISTING	cheep to maintain	**5,0**	4,8	4,7	4,9	**4,5**	**5,8**	4,8	5,1	4,7	5,1	5,1	5,4
EXISTING	widely visited	**6,7**	7,7	5,7	**5,4**	**8,2**	7,7	7,2	7,9	6,4	6,4	5,9	**5,4**
EXISTING	be used more efficiently	**6,9**	**4,7**	**8,5**	7,4	6,6	5,7	7,3	6,6	8,3	7,1	7,2	6,9
EXISTING	advances economic development	**7,3**	7,2	**6,5**	7,3	7,4	7,9	7,8	6,6	7,7	7,2	7,2	**8**
ADDITIONAL	essential	**7,9**	6,7	8	7,5	**6,5**	8,7	7,8	7,4	**9,8**	7,1	9	9,1
ADDITIONAL	should be scattered	**5,4**	**4,3**	7	6,6	6,6	5,4	7,5	6,2	**8,2**	7	7,2	6,8
ADDITIONAL	cheap to provide	**5,2**	5,7	5,4	5,1	4,8	**4,5**	5,3	4,9	4,9	5,8	**6,2**	4,7
ADDITIONAL	increases welfare	**8,0**	7,5	**6,5**	7,6	**9,3**	9,1	7,3	**6,5**	**9,3**	8	8,3	8,1
ADDITIONAL	attracts economic activities	**7,1**	6,5	6,7	6,9	**4,6**	7,8	6,8	7,2	**8,4**	6,7	8	7,9
ADDITIONAL	changes land values	**7,7**	7,2	6,9	7,3	8,5	8,5	**6,8**	7,4	8,2	7,4	8,4	**8,6**
ADDITIONAL	reinforces economic development	**7,7**	7	7,2	7,5	**8,4**	8,2	7,4	7,3	**8,4**	**6,9**	8,2	8,3
STATEMENTS	city should improve existing	**8,2**	7,4	7,8	**7,1**	8,7	8,6	8,1	9	**9,6**	7,6	8,7	8,1
STATEMENTS	city should provide additional	**7,8**	**6,7**	7,1	6,9	8	8,5	7,4	8,6	**9,2**	6,8	8,8	8,2
STATEMENTS	improvement through taxation	**2,6**	**1,8**	2,3	1,8	2,1	3,4	3	3,4	2,7	**3,8**	2,3	2,7
STATEMENTS	provision through taxation	**2,5**	**1,6**	2,4	1,7	1,7	3,3	2,7	**3,5**	2,1	3,2	2,4	3,3
STATEMENTS	all citizens should pay	**3,4**	2,1	3,3	**1,8**	1,9	4,2	3,9	**6,9**	2,9	3,3	3,8	4,4
STATEMENTS	those live near should pay	**1,3**	0,9	0,9	0,6	**0,3**	2,2	0,9	1,3	1	1,4	2,5	**3**
STATEMENTS	GS be given to social uses	**3,9**	4,2	4,4	2,5	**6,4**	4,3	2,8	4,8	**1,7**	4	4,5	3,4
STATEMENTS	GS be given to profitable uses	**3,1**	2,6	**5,6**	2,4	4,6	1,7	4,2	4,2	**1,4**	2,7	2,6	1,9
	income willing to give for improvement	**2,5**	2,4	2,4	2,3	2,6	2,2	2,6	2,5	2,7	**2,9**	**2,1**	2,6
	income willing to give for provision	**2,6**	2,2	2,2	2,6	2,5	**2**	2,8	2,5	3	2,6	**2**	**3,1**
	Welfare indicators												
	happy with living in the city	**6,5**	**8,3**	5,7	6,1	7,5	7,5	**4,5**	5,8	7,2	6,2	6	5,6
	consider moving	**3,2**	3,2	4,2	2,6	**1**	3,6	**6**	3,7	2,4	2,5	3,3	3,7

Halandri has the highest score (6,4) with regard to degree of green areas' dispersion, in contrast to Kotel where provides the lowest score (4,9). In spite of this, Kotel is very pleased with the level of accessibility GS enjoy (8,5), in contrast to the city of Guilianova which gives the lowest score (4,9). People from Bydgoszcz and Halandri are the most satisfied with the quality of their green while inhabitants of Sofia are the least (1,6). Most expensive maintenance of green is deemed in Halandri (perhaps due to the Mediterranean climate), and the least in Leipzig. This is probably related to the fact that the city of Leipzig has over the years developed quite a few innovative ways to reduce costs related to green. As regards frequency of visits, GS of Leipzig attract quite a lot of visitors (8,2) in contrast to green held in Xanthi and Guilianova (5,4). Dresden people argue that their GS is used effectively enough, whereas respondents from Sanok deem that their green can, and should, be used more efficiently. All cities agree that existing UGS advances economic development; Sanok is the least (6,5) and Xanthi the most confident of the case (8,0).

As far as additional green space is concerned, Sofia seems to be quite certain for its necessity (9,8), whereas Leipzig is the least convinced. Sofia again, believes that additional green space should be more scattered within the city (8,2), in contrast to Dresden which regards that green is already quite dispersed (4,3). All respondents agree that additional UGS will increase people's welfare with Leipzig and Sofia to be the most positive (9,3) and the Polish cities the least (6,5). Sofia again regards that extra urban green will attract economic activities and it will reinforce economic development to a great extent (8,4). Least support to the economy by urban green development is seen in Nova Gorica. Leipzig, interestingly, share with Sofia the opinion that urban green will advance economic performance but it does not pinpoint its contribution in terms of attracting economic activities. In fact, they are the most sceptical of all cities whether urban green can play such a role. Green space development is expected to affect considerably the land values in all cities. Xanthi expects to see the highest impact (8,6), and Kotel the lowest (6,8).

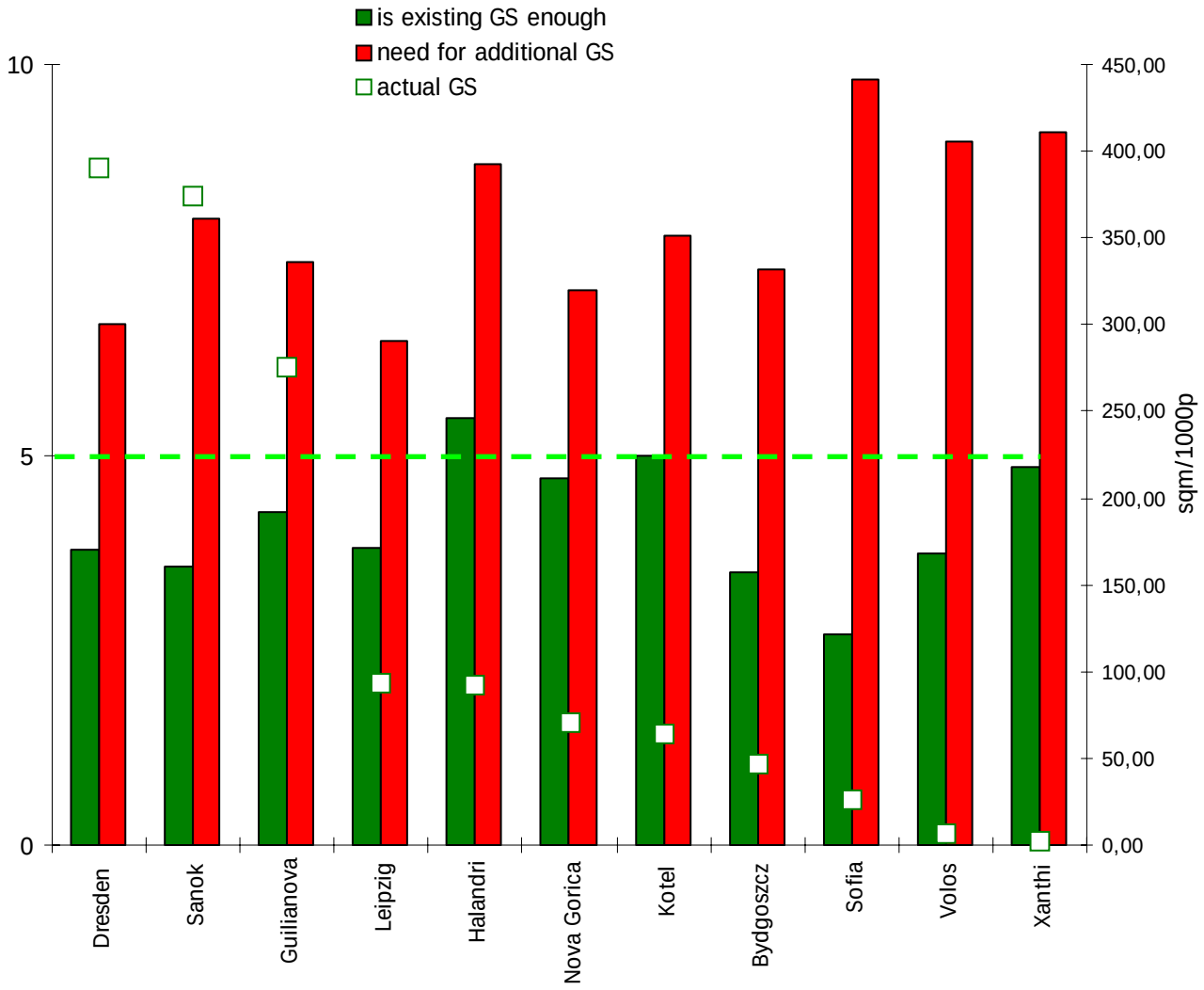
As regards green space provision and improvement, people from Sofia are the most certain that local authorities should take the leading role (9,6). Whether this is to be done though taxation is something which all respondents see with scepticism. The most negative are the people of Dresden and the least those of Nova Gorica and Bydgoszcz. Additionally all respondents are generally hesitant to release green space land for either social or profitable uses. Leipzig people are more open, compared to others, to provide green place for social uses and Sanok to release such land for profitable uses. Least positive to all such actions are people from Sofia.

As far as the issue of direct funding is concerned, all respondents are willing to give a small part of their income for the improvement and provision of urban green. Xanthi and Nova Gorica are the most generous and Volos and Halandri are the least.

Finally, with regard to the welfare indicators, the respondents of Dresden appear to be the most content with their living in the city (8,3), while people from Kotel are the least satisfied and they would consider moving out if conditions allow.

Concluding this comparative analysis Graph 2 puts together the actual situation with the perceptions people have on urban green space. In particular, the questions of 'how much is the existing' and 'how necessary' is additional green area are combined with the actual figures of UGS each city provides. A number of points emerge. First, it becomes evident that independent of the amount of GS available, people believe that the existing UGS is not enough in each city and require additional. Second, Greek cities and Sofia are those that desperately need more green space, due to the fact that they have quite low proportions of green space per inhabitant. Third, the only cities where people regard that their green is about OK are Halandri, Kotel and Xanthi. In Kotel this sound reasonable, given the economic and population decline the city confronts. In Halandri, in turn, this may be attributed to the fact that the municipality is in a relatively better position (in terms of available urban green) as compared to the other Greek cities and the other municipalities which together comprise the urban agglomeration of Athens (which suffers from serious lack of urban green). The case of Xanthi is interesting. Although the city has the lowest amount of UFS per inhabitant, respondents regard that its urban green is about right. The same is the case for Volos (the other Greek city). This is difficult to explain, and the only commend we can make is that perhaps people fill like this because the situation in their city is not as bad as is in the other cities in the country.

Graph 2



4. Conclusions

This report has examined people's attitudes and perceptions towards various aspects of existing and prospective UGS, exploring a number of issues with regard to its quantity, quality, necessity, attractiveness, financing and economic potential. The empirical analysis has been based on a questionnaire survey conducted in the 11 *GreenKeys* cities, which have been endowed with very different amounts of UGS. The results of the analysis gave rise to a number of important conclusions, contributing in this way to enrich our current knowledgebase.

First, the survey provides evidence of a strong demand for urban green regardless of the amount that is available in each city. The revealed preferences of the people indicate that the available quantity and, especially, quality of green space in their cities is lower than required. On these ground people are reluctant

to release green land to other uses, even social ones. This implies that, when necessity arises, policy makers should consider to accommodate and link these other uses with the urban green the city has (multi-use spaces).

Second, the results of the analysis leave little ground for discussion on who should pay for the provision and improvement of urban green. The overwhelming majority of the sample stated that the local authorities should primarily bear the costs of urban green improvement and provision. Despite that, a part of the sample was willing to contribute a small share of its income for the provision or improvement of green.

Third, the study corroborates the view that urban green affects the values of land and properties in close vicinity. Most respondents acknowledged that land and property located adjacent to newly developed urban green increase their values substantially, compared to other properties.

Fifth, the survey gives support to the idea that urban green contributes to the economic development of the cities. This is done on two fronts: first, by improving the quality of urban environment and the overall quality of life for all inhabitants and second by attracting and reinforcing a number of economic activities.

Forth, although the analysis makes clear that UGS advances people's welfare, there seems to be differences between places with regard to how much GS is adequate in each city. Further research is required to explore this in depth and to assess the degree at which this constitutes a socio-cultural issue or it is related to the specific economic, political and spatial conditions that prevail in each city.

These findings have important implications for policy and should be taken into consideration in the design of a 'green' strategy of development in the European cities.

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