

## Appendix 1. List of journals and Cases

Cases	Title	Source	Author
1	Open space planning for Travis Country, Austin, Texas: a collaborative design	Landscape and Urban Planning 42 (1998) 259-268	Michael Teal, Chang-Shan Huang, Jon Rodiek
2	Participatory democracy and sustainable development: integrated urban environmental management in Porto Alegre, Brazil	Environment and Urbanization 2002; 14; 181	Rualdo Menegat
3-6	urban sustainability-discourses, network and policy tools	Progress in Planning, Vol. 41, pp. 1-74, 1997	
7	Reclaiming public spaces in space: the ecology of neighborhood open the town of Abu-Nuseir, Jordan	Landscape and Urban Planning 36 ( 1996) 197-216	Tawfiq M. Abu-Ghazze
8-9	Open Space Protection: Conservation Meets Growth Management	A Discussion Paper Prepared forThe Brookings Institution Center on Urban and Metropolitan Policy April 2002	Linda E. Hollis, AICP
10-13	From greenbelt to greenways: four Canadian case studies	Landscape and Urban Planning 33 (1995) 47-64	James Taylor, Cecelia Paine, John Fitz Gibbon
14	Turning brownfields into green space in the City of Toronto	Landscape and Urban Planning 62 (2003) 181–198	Christopher A. De Sousa
15-16	The relationship of historic city form and contemporary greenway implementation: a comparison of Milwaukee, Wisconsin (USA) and Ottawa, Ontario (Canada)	Landscape and Urban Planning 68 (2004) 199–221	Donna L. Erickson
17	Nonprofits and Park Provision in Los Angeles: An Exploration of the Rise of Governance Approaches to the Provision of Local Services	Social science quarterly, Volume 84, Number 4, December 2003.	Stephanie Pincetl
18	A greenway network for Singapore	Landscape and Urban Planning 76 (2006) 45–66	Kiat W. Tan
19	Social Movements and Ecosystem Services—the Role of Social Network Structure in Protecting and Managing Urban Green Areas in Stockholm	Ecology and Society, Vol. 13, Issue 2, Article 39	Henrik Ernstson Sverker Sörlin, and Thomas Elmqvist
20	Community and conservation land trusts as unlikely partners? The case of Troy Gardens, Madison, Wisconsin	Land Use Policy 20 (2003) 169–180	Marcia Caton Campbella, Danielle A. Salus
21	Incorporating Green-area User Groups inUrban Ecosystem Management	Ambio Vol. 35, No. 5, August 2006 <a href="http://www.ambio.kva.se">http://www.ambio.kva.se</a>	Johan Colding, Jakob Lundberg and Carl Folke
22	History and Local Management of a Biodiversity-Rich, Urban Cultural Landscape	Ecology and Society 10(2): 10.	Stephan Barthel, Johan Colding, Thomas Elmqvist, and Carl Folke
23	The urban forestry programme in the heavily built-up milieu of Hong Kong	Cities, Vol. 17, No. 4, pp. 271–283, 2000	C Y Jim

*Continued...*

<b>Cases</b>	<b>Title</b>	<b>Source</b>	<b>Author</b>
24	International greenways: a Red River Valley case study	Landscape and Urban Planning 33 (1995) 195-210	Jon Bryan Burley.
25	The greening of brownfields in American cities	Journal of Environmental Planning and Management, Vol. 47, No. 4, 2004: 579 — 600	Christopher A. De Sousa
26	An Urban Community-Based Intervention to Advance Social Interactions	Environment and Behavior 2009; 41; 22	Jan C. Semenza and Tanya L. March
27	Restoration of the urban forests of Tokyo and Hiroshima following World War II	Urban Forestry & Urban Greening 5 (2006) 155–168	Sheauchi Cheng, Joe R. McBride
	The significance and praxis of community-based sustainability projects: Community gardens in western Australia	Local Environment, Vol. 3, No. 2, 1998	Laura Stocker a; Kate Barnett
30-34	How do Stakeholders and Legislation Influence the Allocation of Green Space on Brownfield Redevelopment Projects? Five Case Studies from Switzerland, Germany and the UK	Business Strategy and the Environment Bus. Strat. Env. 16, 512–522 (2007)	Wendy Altherr, Daniel Blumer,
35	Implementing urban greening aid projects – The case of St. Petersburg, Russia	Urban Forestry & Urban Greening 6 (2007) 93–101	Kjell Nilssona, Ulrika Akerlund, Cecil C. Konijnendijk, Alexander Alekseevd, Ole H. Caspersena Susanne Guldagera, Evgeny Kuznetsovd,
36	Space for community – the study of resident involvement in neighbourhood space management	WIT Transactions on Ecology and the Environment, Vol 93,	P. Castell
37	The failure and success of greenbelt program in Beijing	Urban Forestry & Urban Greening 6 (2007) 287–296	Jun Yang, Zhou Jinxing
38	Philanthropic Strategies in Place-Based, Collaborative Land Conservation: The Packard Foundation’s Conserving California Landscape Initiative	Nonprofit and Voluntary Sector Quarterly 2006; 35; 405	Francisco Delfin, Diliman Shui-Yan Tang
39	A longitudinal study of open space zoning and development in Hong Kong	Landscape and Urban Planning 87 (2008) 258–268	Bo-sin Tang, Siu-wai Wong
40	Urban Regeneration and Public Space: The Story of an Urban Park	Space & Polity, Vol. 4, No. 1, 23- 40, 2000	Neil Mcnroy
41	Visions of nature: conflict and compatibility in urban park restoration	Landscape and Urban Planning 56 (2001) 35-51	Paul H. Gobster
42	Restoration of the Don Valley Brick Works: Whose Restoration? Whose Space?	Journal of Urban Design, Vol. 10. No. 3, 331–351, October 2005	Jennifer Foster

## Appendix 2. Scoring and Ranking of green space Performance

No	Location	Y		A	B			C			D				E					
		Ranking	Per- formance	Responsiveness to actual issues	Sustainability			Natural environmental benefit			Economic benefit				Socio-cultural benefit					
				The relationship of the project with existing problems/issue	Natural environmental support	Socio-political support	Financial support	Conservation of land, biodiversity, natural habitat	Improving air quality	Improving water quality/antipating water related problem	Increasing tax base.	Increasing property values.	Increasing tourism revenue.	Jobs related to maintenance or construction of such areas	Equity : placement of open space to create more equitable	Accessibility : increase access for people	Aesthetic Value/ amenity	Scientific value/ giving knowledge/im proving skill	Therapeutic value	Cultural/heritage preservation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1	Jordan	1	4	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Sterling	1	6	2	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
3	s.Francisco	1	6	2	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
4	Stockholm	1	9	2	0	1	0	2	0	0	0	0	0	0	0	0	0	2	0	2
5	Golf Stockholm	1	8	2	1	1	1	2	0	0	0	0	0	0	0	0	1	0	0	0
6	Portland	1	9	2	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	0
7	Erlenmatt	1	9	2	1	1	0	2	0	0	0	0	0	0	1	1	1	0	0	0
8	Gleisdreieck	1	8	2	1	1	0	1	0	0	0	0	0	0	1	1	1	0	0	0
9	King's Cross	1	8	2	1	1	0	1	0	0	0	0	0	0	1	1	1	0	0	0
10	Zentrale Bahnfl	1	9	2	1	1	0	2	0	0	0	0	0	0	1	1	1	0	0	0
11	Stadtraum	1	8	2	1	1	0	1	0	0	0	0	0	0	1	1	1	0	0	0
12	Sweden	1	9	2	1	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0
13	Beijing	1	5	1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0
14	California	1	8	2	1	0	1	1	0	0	0	0	0	0	0	0	1	2	0	0
15	Hongkong	1	6	1	0	0	0	1	0	0	1	1	1	0	0	0	1	0	0	0
16	Glassgow	1	9	1	0	0	1	0	0	0	1	1	1	0	0	0	2	0	0	2
17	Brazil	2	12	1	1	2	1	2	0	0	0	0	0	0	1	1	1	0	0	2
18	Florence	2	14	1	1	1	0	2	1	1	0	0	1	0	1	1	2	1	0	1
19	Bologna	2	14	1	1	1	0	2	1	1	0	0	1	0	1	1	2	1	0	1
20	N.Capital	2	13	1	1	1	1	0	1	0	1	1	1	0	1	0	2	0	0	2
21	Milwaukee	2	15	1	1	1	1	2	0	2	0	0	1	0	0	0	2	2	0	2
22	Ottawa	2	14	1	1	1	1	1	1	2	0	0	1	0	0	0	2	1	0	2
23	LA	2	12	2	0	1	2	1	2	0	0	0	1	0	1	1	0	1	0	0
24	Troy Garden	2	12	2	0	2	2	0	0	0	0	1	0	1	2	1	1	0	0	0
25	Hongkong	2	10	2	1	1	0	2	1	1	0	0	0	0	0	0	2	0	0	0
26	Red River	2	11	2	1	1	1	2	1	1	0	0	0	0	0	0	1	1	0	0
27	USA	2	12	2	2	1	2	0	0	0	0	0	1	0	0	0	2	1	0	1
28	Tokyo	2	13	2	1	1	1	2	2	1	0	0	0	0	0	0	1	0	0	2
29	Hiroshima	2	13	2	1	2	1	2	2	1	0	0	0	0	0	0	1	0	0	1
30	King William	2	14	2	0	2	1	2	0	2	0	0	0	0	1	1	2	1	0	0
31	Travis	3	19	2	1	2	0	2	1	2	0	0	2	0	2	1	2	2	0	0
32	Leicester	3	17	2	1	2	1	2	1	1	0	0	1	0	1	1	2	2	0	0
33	Edinburgh	3	16	2	1	1	1	2	1	1	0	0	1	0	1	1	2	2	0	0
34	Fish Creek	3	21	2	1	2	1	2	2	2	0	0	1	0	1	1	2	2	0	2
35	Meewasin	3	18	2	2	2	1	2	1	1	0	0	0	0	1	1	1	2	1	1
36	Greater	3	19	2	2	1	1	1	0	1	1	1	1	1	1	2	1	2	0	1
37	Singapore	3	18	2	1	1	1	2	1	2	0	0	0	0	2	2	2	2	0	0
38	UNP Stockholm	3	21	2	2	2	1	2	2	2	0	1	1	0	0	0	2	2	0	2
39	St. Petersburg	3	17	1	1	2	0	2	2	2	0	0	1	0	0	0	2	2	0	2
40	Montrose point	3	17	2	2	2	0	2	2	0	0	0	1	0	0	0	2	1	1	2
41	Don Valley	3	19	1	1	0	1	2	2	2	0	1	1	0	0	0	2	2	2	2
42	Brownfield	4	24	2	2	2	1	2	0	2	1	1	2	1	1	1	2	2	0	2
Score:				2																
				1																
				0																

Source: data analysis

### Appendix 3. Supporting Statement for UGSP’s scoring

No	Location	A	B	C	D	E
(1)	(2)	Responsiveness to actual issues	Sustainability	Natural environmental benefit	Economic benefit	Socio-cultural benefit
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Travis Country	the Master Plan proposed various elements including trails, a wetland pond, a community center, community gardens, a bicycle loop, and a park; The problem of water impoundments was addressed	it is often difficult for the same class of students to do the same project for more than one semester. The Travis Country project explored ways to solve these problems	construction of a wetland pond was proposed outside the 100-year floodplain with a diversion structure used which is acceptable by the City. This pond will function as a natural water cleansing system. The pond will also provide wetland habitat for a variety of wildlife species		The success of the Travis Country project has demonstrated that students' participation in a community outreach project is an effective teaching tool. New community center (pool, tennis, basketball courts, play ground and garden of native plantings will be the focus of activities for the residents.
2	Porto Alegre	The establishment of Green Area Adoption Scheme and City Square Councils Programme	Participatory budgeting as a tool to accommodate public interest	Help to sustain urban birds life due to adequate provision of green space		Socio-cultural benefit due to adequate provision of green space
3	Florence	Edinburgh is surrounded by a substantial green belt, and Bologna and Florence, in the years of the economic boom, were able to safeguard their hills, and prevent urban growth from destroying the hill landscape	In recent years the public and specific environmental groups seem to have gained more voice	there were well developed strategies for green spaces and in each case these identified: areas to be protected; the potential for an integrated green space network across the city		All four cities have accessible green spaces outside the city; From the planners' point of view, the aesthetic image was of prime importance in reunification Florence
4	Bologna	Edinburgh is surrounded by a substantial green belt, and Bologna and Florence, in the years of the economic boom, were able to safeguard their hills, and prevent urban growth from destroying the hill landscape	increasingly formal and informal groups belonging to environmental movements have acquired more force regarding green space policies	there was also a recognition that green spaces could help control local and global atmospheric pollution there were well developed strategies for green spaces and in each case these identified: areas to be protected; the potential for an integrated green space network across the city; the necessity to improve on simply safeguarding areas is noted and in addition specific strategies are set out to increase its value: fauna repopulation; protecting land in relation to hydrogeology and forest fires; maintaining agricultural activities, through the re-use of abandoned farm houses; making pedestrian footways		All four cities have accessible green spaces outside the city.; plan also had a strong aesthetic approach to green spaces
5	Leicester	Edinburgh is surrounded by a substantial green belt, and Bologna and Florence, in the years of the economic boom, were able to safeguard their hills, and prevent urban growth from destroying the hill landscape	Leicester has a very strong network of NGOs; sustainability advantage from educational value	the importance of ecological images of green space across the city; there were well developed strategies for green spaces and in each case these identified: areas to be protected; the potential for an integrated green space network across the city	green spaces can support the improvement of the city centre in economic terms by providing attractive settings for new development and facilities for shoppers and other visitors	All four cities have accessible green spaces outside the city; Leicester, where the council aims to educate the general public and to encourage them to participate in and improve the natural environment

(1)	(2)	(3)	(4)	(5)	(6)	(7)
6	Edinburgh	Edinburgh is surrounded by a substantial green belt, and Bologna and Florence, in the years of the economic boom, were able to safeguard their hills, and prevent urban growth from destroying the hill landscape	Edinburgh does not have such a sophisticated network in place and the NGOs do not work as closely and continuously with local government; sustainability advantage from educational value	the main motivations behind green space policy are currently aesthetic, functional, ecological and symbolic; there were well developed strategies for green spaces and in each case these identified: areas to be protected; the potential for an integrated green space network across the city	the main motivations behind green space policy are currently aesthetic, functional, ecological and symbolic	All four cities have accessible green spaces outside the city; aesthetical motivaton; historic important; Edinburgh, too, has an educational side to its Urban Nature Conservation Strategy
7	Jordan	poor designed and poorly maintain	Open spaces that are located near steep slopes in Abu- Nuseir are rarely used by people. They are particularly dangerous for use by children	The role of natural environmental quality has been neglected		poor designed and poorly maintain
8	Sterling Forest	The purchase is an important example of the way open space acquisition shapes metropolitan development today, because it included multi-layered financing and presented the tri-state metropolitan New York with an important set of strategic choices regarding how best to grow; Sterling Forest provides a series of useful lessons for open space aqicition	creates leapfrog development or provides a barrier that will drive urbanization back toward New; it is unlikely that New Jersey or the philanthropic groups would have committed the funds for a different purpose	prevent the construction of millions of square feet of built space; Provides drinking water for northern New Jersey		
9	San Fransisco		Beginning in 1998, the Open Space District began to suffer from criticism that it was focusing too much attention and funds on properties in remote parts of the county, and also failing to acquire land in a systematic way.	The easement almost doubled the amount of land protected in the county,		
10	National Capital	The Greenbelt influenced adjacent urban form, but has been ineffective in controlling urban growth outside the Greenbelt.	native forest cover remains in some areas; better drained soil (some). Federal expropriation of greenbelt lands proved unpopular to local resident and has had long-term effects on the tax base of area municipalities; The Greenbelt has not had widespread public support	Political boundary didn't respond to ecological system; only portion of stream and wild life corridors have been protected; ecological principle (connectivity) was not employed; resulted in isolation of natural, recreational, institutional land use	long term effect on tax base; short term leases = lack of investment	scenic driveway; ineffective in controlling urban growth; National Capital has no complete integrated system for public access and provide limted public facilitise
11	Fish Creek	Successful in achieving its original goals	Fish creek provincial prak has been successful in achieving the original goals. The initial public support has been sustained over the pas 20 years; storm water management has been applied;	Natural has been successfully protected		picnic areas artificial swimming lake and a major interpretive facility that serves both the general public and school group; cultural sites have been successfully protected; educational values have been exploited
12	Meewasin Valley	In general this project is resulting in achivement of many of the original planning objectives	Sensitive nature; the Meewasin Vaalley greenway camse about because of broad public support	Continuing measures to protect and manage natural systems contribute to potential long-term success		trail system and interpretive facilities; The comprehensive trail system provides for pedestrian access from adjacent neighborhoods and enhanced linkage within the corridor
13	Greater Toronto	Although it is too early to evaluate the results of the Toronto approach to greenway development, it appears to be the way of the future.	The results of the Toronto's approach appears to be the way of the future	Greater Toronto is highly ecological in concept	Try to support sustainable development within economic system	Greater Toronto Greenway represents an approach that encourages full communication and cooperation among all agencies and land owners

(1)	(2)	(3)	(4)	(5)	(6)	(7)
14	Brownfield Toronto	Overall, it is obvious that the success of these projects has made park planners and other stakeholders more confident in pursuing, supporting and acquiring other brownfield sites throughout the city for greening purposes, even if, as one interviewee put it	Limited financial resources and political authority; located on greenway and flood plain areas; private funds constitute as community support	the brownfields were restored to ecological habitat; storm water retention pond; wetland rehabilitation, the improvement of the environment, the preservation of historically-significant space, the reduction of urban blight, and economic benefits.	Interestingly, many of the interviewees pointed out that economically-based objectives are becoming increasingly important as an argument for justifying redevelopment projects in general.	active and passive recreation activities; involve elaborate design scheme
15	Milwaukee	Lincoln Memorial Drive, The county had purchased over 800 ha of parkland by 1930, and laid the foundation for a connected greenway system	suffered from a paucity of influential leaders and advocated for connected greenway system; there is no strong powerful leader; lack of advocacy organization particularly for open space	“Primary environmental corridors consist of elongated areas in the landscape which encompass the most important and highest quality elements of the regional natural resource base, including the best remaining surface waters and associated undeveloped floodlands and shorelands, woodlands, wetlands, wildlife habitat, groundwater recharge areas, and scenic, historic, scientific and cultural sites”		multiple uses—jogging, in-line skating, bicycling, and cross-country skiing; scenic, historic, scientific and cultural site; Hank Aaron trail: recreation is the priority; both recreation and motorized transportation are foremost
16	Ottawa	Due to administrative and financial constraints, the greenways plan has been somewhat stalled; none of the corridor are fully completed; environmentally sensitive areas of the city had not been fully mapped; however it is helping to protect some land at the time; The greenbelt’s contribution to urban structure has been more to separate satellite communities from the main urban area, rather than to constrain suburban development	suffered from a paucity of influential leaders and advocated for connected greenway system; Due to administrative and financial constraints, and because of the city’s reorganization, the greenways plan has been somewhat stalled	much of the land that was purchased for the greenbelt was previously farmed, so has been gradually managed for increased habitat quality. In fact, there are now conflicts with bears, moose, and coyotes in areas that were formerly farmland		the city are developing stronger ecological protection goals, while focusing on recreation as a key component
17	LA	In the area of funding for parks and open space, clearly the nonprofit sector played a leadership role in building public/private coalitions to get additional public funds that would be used to direct land-use decisions	Involving CBO to get more fund; this approach proved so effective	Preliminary survey analysis shows that latinos have a high comprehension of, for example, the environmental contributions trees make to reducing air pollution and cooling the ambient temperature; LA parkway system, conserved ecosystem...	They are able to establish the parameters of who and what gets funded beyond traditional park and recreation providers through the competitive funds that have been included in the propositions.	Amenity and aesthetic view
18	Singapore	Strategic alliances are made with key land-use agencies and local government leaders. Some pilot projects for the installation of the greenway system are described. The problems encountered and solutions arrived at are discussed. The response of stakeholders to the pilot projects implemented are evaluated and used to inform subsequent efforts in greenway planning	Lands set aside as drainage buffers I ideal for developing greenways; strong political will from the founding father of modern singapore	periodic de-silting of drain; protected park and cover for wild life		recreational activity; public involvement in greenway planning and implementation is comparatively lower than for greenways established in US, UK and Canada; living class room for nature awareness

(1)	(2)	(3)	(4)	(5)	(6)	(7)
19	Stockholm	it was the political actions of the movement that gave identity to the area and shaped the transformational change leading to its legal protection in 1995	The dense social area between core and semi core actors is key to understanding the movement's success ; different land trusts have financial and technical resources; strong background and expertise	The park has a high bio-diversity; important node in the city's ecological network;		its royal history. Both cultural historical artifacts (planned English parks, sculptures, castles, burial sites, runestones, etc.); scientific history and biology; it also represents a perfect playground for collective learning
20	Troy Garden	Integrated open space and food production uses on the majority of the site. In 2001 the land was totally owned by Northside community.	This combination of uses places ; Tension to do with land resource allocations from both organization; slow process (difficulty of coordination)			UOSF's interest were met through the prairie restoration, community gardens, edible landscape. Horticultural therapy gardens
21	Golf Stockholm	Integrated open space and food production uses on the majority of the site. In 2001 the land was totally owned by Northside community.	This combination of uses places			UOSF's interest were met through the prairie restoration, community gardens, edible landscape. Horticultural therapy gardens
22	UNP Stockholm	the three land uses cover 18% of the studied land area of metropolitan Stockholm, which corresponds to more than twice the land set aside as protected areas; We conclude that a wider integration of lands managed by local user groups in urban biodiversity management and in the planning and design of new urban areas holds promise to further improve conditions for biodiversity and ecosystem services in urban areas. they constitute to significant part or green space in Stockholm	Tends to be constructed on former arable lands; Population pressure; trade off because of large number of stewards involved	Golf course mostly located in natural area and consist of many natural habitat; provide critical wetland habitat; In Sweden, lands used for golf often support declining amphibian populations; one-fifth of the golf courses located in the vicinity of protected areas can functions as buffer zone	Reduce transaction cost	Sport and recreational
23	Hongkong	Tree planting program road sites, tree planting in formal public green space, tree planting program in informal green space by private developer	The Fundamental limitation to tree growth in urban Hong Kong is the grave shortage of plantable space, that is the non-built up and non paved areas interspersed among the urban fabric. Furthermore, the land is beset by serious topographical constraints/terrace hill slopes; the physical and institutional restrictions are more acute and are difficult to overcome; however there is a potential fund from the developer	they play pertinent landscape, ecological and environmental roles, serving microclimatic amelioration, fresh air flushing effect, and pleasant green backdrop with constitutes the premier international image of the city		Aesthetical value and amenity: road site trees, podium gardens, rooftop habitats

(1)	(2)	(3)	(4)	(5)	(6)	(7)
24	Red River Valley	Research and planning directions beyond Phase I were not clearly established; however, members of the Clarence G. Schilling Memorial Fund advisory committee expected to assess their options and potential to work with local governmental groups in the greater Fargo-Moorhead metropolitan area to develop a formalized plan for the greenway, representing Phase ;All gardens exist today except the garden at the children's zoo, which suffered severe vandalism;Even though the preservation and embellishment of the greenway may be successful, habitat loss in the boreal forest, Central America, and South America may render the greenway ineffective, because the migrating songbirds require important habitat features that cannot be supplied in the greenway.	flood prone area (glacial lake); potential funding from the foundation	This greenway serves as wildlife habitat for migrating song birds; resulted in improved vegetation cover of non-wooded herbaceous tree canopy corridor, augmented by herbaceous vegetation patches, food plots, and snags		
25	USA	Overall, such strategies, combined with an increasing awareness of remediation techniques and technologies generally, have been rather successful	According to the respondents, lack of financial support and lack of information impeded their brownfield redevelopment; other: political obstacle; government support is the onl source of funding	However, co-ordinators for 18 of the sites indicated that this issue received 'little' or 'no' concern on the part of their communities (issue of contaminated land); conservation and rstoration habitat; flood control	Although many respondents mentioned economic simulation as a key benefit, few ranked it as the most important	provision of new open space and recreational sites is the primary benefit according to the respondents; aesthetic benefit; historical preservation; most of them are human benefit
26	Portland	they could help resolve problems or generate a surplus of amenities for common good; the project is great, creates a sense of community	Majority of the respondents (66%) never participated in the planning, design or constuction of the urban feature; reason for non participation = time, work, heath; they seem originally support the project			Community involvement in Urban desing can enrich social networks with direct benefits for social capital and wellbeing; generate amenity. The project look unfinished but they anticipated that the project would meet their aesthetic standards upon completion
27	Tokyo	Fundamental Guidelines for Post war recovery Planning	In Tokyo, people wanted a return to pre-war condition and they wanted little interference by public planners in the way they restored their private property	Better environment condition after war bombing		Return to the past
28	Hiroshima	Hiroshima used public participation and community involvement to restore the urban greenery successfully and, until today, has maintained a program to conserve the trees that survived the atomic bomb	Hiroshima used public participation and community involvement to restore the urban greenery successfully; In 1954 the then mayor, Shinzo Hamai, appealed to all mayors in Japan to donate trees to plant in Peace Park	Better environment condition after war bombing		Rebuilding social capital along new design



(1)	(2)	(3)	(4)	(5)	(6)	(7)
29	King William Park, Australia	Its significance is further enhanced because it realises very effectively some of the particular or additional roles that community gardens can play in promoting physical, ecological, sociocultural and economic sustainability	The wealth of resourceful humans also meant that the garden could play many roles; conflict between several members	Water conserving approach was pursued	The garden was certainly about food production in an ecologically sustainable manner	the garden was planted as an edible landscape; To day the park is well-used, much-loved garden and playground; much about using community science; FINCA members and the local government now have a much better understanding of each other's processes and needs
30	Erlenmatt	We show that the distance to the city centre, the involvement of the stakeholders and the current legislation are important in explaining the quantity and type of green space allocated	Support for ecological restoration projects typically came from established community-based environmental groups while support for green space in under-served neighbourhoods typically came from smaller, ad-hoc groups that were united by a community leader (or leaders).	Only in the project 'Erlenmatt', Basel, a nature reserve was allocated, covering a surface of 1.9 ha; 44% of green space		All these areas shall stay accessible to the public, protected only by visitor's guidance; amenity and aesthetic value: The images with which both stakeholder groups deal show that green space is an important issue,
31	Gleisdreieck	We show that the distance to the city centre, the involvement of the stakeholders and the current legislation are important in explaining the quantity and type of green space allocated	Support for ecological restoration projects typically came from established community-based environmental groups while support for green space in under-served neighbourhoods typically came from smaller, ad-hoc groups that were united by a community leader (or leaders).	In total this area allocated to the little forest accounts for 8% of the overall open space and can be classified as a nature conservation area; 8% of green space		All these areas shall stay accessible to the public, protected only by visitor's guidance; amenity and aesthetic value: The images with which both stakeholder groups deal show that green space is an important issue,
32	King's Cross Central	We show that the distance to the city centre, the involvement of the stakeholders and the current legislation are important in explaining the quantity and type of green space allocated	Support for ecological restoration projects typically came from established community-based environmental groups while support for green space in under-served neighbourhoods typically came from smaller, ad-hoc groups that were united by a community leader (or leaders).	Bordering 'King's Cross Central' is the 'Camley Street Natural Park' nature reserve, a forest that developed naturally on a former coal store site The canal on the perimeter of the 'King's Cross Central' is classified as a nature conservation site; 5% of green space		All these areas shall stay accessible to the public, protected only by visitor's guidance; amenity and aesthetic value: The images with which both stakeholder groups deal show that green space is an important issue,
33	Zentrale Bahnhöfen',	We show that the distance to the city centre, the involvement of the stakeholders and the current legislation are important in explaining the quantity and type of green space allocated	Support for ecological restoration projects typically came from established community-based environmental groups while support for green space in under-served neighbourhoods typically came from smaller, ad-hoc groups that were united by a community leader (or leaders).	These extremely large railway habitats can also be classified as nature conservation areas and account for 27% of the total green space; 21% of green space		All these areas shall stay accessible to the public, protected only by visitor's guidance; amenity and aesthetic value: The images with which both stakeholder groups deal show that green space is an important issue,
34	Stadtraum Hauptbahnhof	We show that the distance to the city centre, the involvement of the stakeholders and the current legislation are important in explaining the quantity and type of green space allocated	Support for ecological restoration projects typically came from established community-based environmental groups while support for green space in under-served neighbourhoods typically came from smaller, ad-hoc groups that were united by a community leader (or leaders).	In the 'Stadtraum HB' the nature conservation area will be a large strip following the existing railway tracks (Baumgartner et al., 2004). This line should serve as an ecological corridor for typical species of railway habitats, such as the wall lizard ( <i>Podarcis muralis</i> ) or wild bees; 9% of green space		All these areas shall stay accessible to the public, protected only by visitor's guidance; amenity and aesthetic value: The images with which both stakeholder groups deal show that green space is an important issue,

(1)	(2)	(3)	(4)	(5)	(6)	(7)
35	St. Petersburg	Achievements also included notable physical improvements to one park. But the main project impacts were improved communication and collaboration between the local park department and local academia, as well as expertise developed in running a complex urban greening project. The project failed, however, in its public involvement ambitions	project sustainability seemed ensured by a formal agreement of DGP and FTA to continue developing the system	Green spaces host important biodiversity values and the city has several nature reserves within its boundaries. Environmental services offered by green spaces include, e.g., protecting drinking water resources and reducing atmospheric pollution, of which the increasing car traffic is the main contributor	parks and gardens cater for daily recreation	parks and gardens cater for daily recreation; the surrounding greenbelt forests harbour the population's house; In the project, the relationship and collaboration between DGP and FTA was improved considerably; areas also have important cultural-historical values, as they were established during different periods of time and the most popular and famous ones date back to the Tsar era
36	Sweden	the collaboration patterns have been superior to the conflict pattern in Eriksbo; The evaluations and studies of Holma show the high potential of resident involvement in breaking a process of suburban decay and turn it to a positive rejuvenation process	They are in general very optimistic about the phenomenon resident involvement in neighbourhood space management. There seem to be no reason to question that it may be a source to social capital building and diversified green living environments			Both the landlord and most residents benefit from a nice looking environment and good neighbour relations; The evaluation of the project concludes that there was an increase in environmental awareness and engagement among the involved, although not remarkably high. It also highlights that the project was successful in creating nice and flourishing local environments and strengthening the social cohesion among the neighbours at the yards
37	Beijing	From the classified satellite images one can clearly see that the first greenbelt failed to separate the central urban agglomeration from the outer urban agglomerations. In the second greenbelt, there was a steady increase of the built-up area and loss of trees from 1992 to 2005	Less support and public acceptance: Not surprisingly, even though only one-third of the land could be legally developed into real estate, farmers and developers often collaborated to develop more than that quote	The greenspaces in the first greenbelt can be linked with other greenspaces inside the city and form an integrated greenway system		Plantations for scenic beauty will account for 20% of the total area of the second development
38	California	This place-based strategy yielded significant achievement in terms of total acreage conserved	Less socio-political support: most of the respondents argued that there were organizational and jurisdictional inequalities in providing funds (selective targeting of grand money); public acceptance: the initiative underscore widespread public acceptance for conservation	resource conservation: November 2003, the Packard Foundation announced the successful completion of CCLI, claiming in its final report that the program had helped preserve 342,000 acres of California landscape		its strategy of enhancing regional conservation capacity through capacity-building grants to many nonprofits "may well be CCLI's biggest contribution in the long-term; aesthetic: impressive landscape
39	Hongkong	Although the absolute land area of "Open Space" zone increased over time, its percentage share of land in the whole territory actually dropped from 9.8% in 1965 to 3.9% in 2006 .	weak budget and political support: This separation of planning and implementation authorities makes it likely for a time lag to exist between planning and resources commitment for the implementation of low-priority public projects, such as public open space; Against this background, the future prospect of open space planning in Hong Kong is not promising		Such an increase in the amount of planned "Open Space" was used to support the growth of residential land and hence the build-up of population	Recreational and amenity area

(1)	(2)	(3)	(4)	(5)	(6)	(7)
40	Glasgow	The CC's expectations seem very small compared with the vision of the designer and the City Council, reflecting the reality of previous campaigns for community resources which had been thwarted. The community desired a functional urban space, but there was a stronger desire by the Parks and recreation Department to create a space which had wider resonance and could be seen as unique	The 'community' was primarily left with this task. The park ultimately became a divisionary aspect within the local neighbourhood and became the focus for much of the work of the CC; The City Council allocated £20 000 per annum towards the upkeep of the park; some public opinion based on interview contsitude less public acceptance of the park; the water course became frequently blocked; a wall fell down at the western edge, etc	Thus for the agencies of regeneration the park offered an opportunity for the city to create a city centre and local resource for local residents which would have a wider significance in terms of their image-making potential	However, the park is also within a local residential area and thus has a strong local use function. In addition, the local use function is highly variable depending on which local section of the community uses the park; It reintroduces nature into the city core to refresh, rekindle appreciation, stimulate enjoyment for and use by the whole multi cultural community It also provides space that can be used for events and has potential for activities of local and city-wide appeal	
41	Montrose point	Stakeholder negotiation showed how the vision were compatible and how iconic feature might "nest" within each other as a consideration for landscape design and management	Although the planning process is still ongoing, this appears to be the general direction being taken by stakeholders for Montrose Point; by working to integrate the different visions of nature expressed by the parks' stakeholders and protecting the icons that they value most highly, park planners and landscape architects can build the cultural support needed to sustain natural processes and functions; environmental support: Because of its relatively large size, Montrose holds high potential for a successful restoration, one that would sustain plant and animal	Publicity given to these habitat improvement efforts has helped to attract birders, and today the Magic Hedge has a national and international repu-tation for birding; a good restoration would provide the same horizontal strati-fied look of the Prairie Style design yet take advantage of the greater diversity of native plant species now commercially available and ones better suited to the specific conditions on the site; Within this vision of nature, individuals see the restoration of Montrose Point in general, and the Magic Hedge within the point in particular, as a means to improve wildlife habitat along the lakefront; breath of fresh air	Recreational site	From a restoration standpoint, the park has an interesting natural and cultural history, one that exemplifies the challenges inherent in urban park restoration; Following the Prairie Style ideals promoted by Jens Jensen and others, Caldwell's plan for Montrose Point used native plants in an aesthetic-symbolic emulation of the diverse midwestern US landscape of prairie, savanna, and woodland ; The chief purpose of nature realized through restoration of the Caldwell plan would be to provide people with an aesthetic experience; health: "a sense of wilderness", "isolation from the din of the city", "a breath of fresh air", "a special place", and "a spiritual retreat from the rest of the park"

## Appendix 4. Quantitative Analysis

### Descriptive Statistics

According to Studenmund (2001), descriptive statistics can be used to summarize a set of data. Some descriptive statistics often used in research are mean and standard deviation, median, maximum value, minimum value and range. Mean describes the center of data, around which the other values are spread. The mean is the sum of all the scores divided by the number of scores. For population data, the formula is:

$$\mu = \Sigma X / N$$

where  $\mu$  is the population mean and  $N$  is the number of scores. If the scores are derived from a sample, the symbol  $M$  refers to the mean and  $N$  refers to the sample size. The formula will be

$$\mu = \Sigma X / N$$

Standard deviation is the average squared deviation of the observation about their mean (Studenmund, 2001) or indicates how spread the data is. The formula is

$$s = \sqrt{\frac{1}{N - 1} \sum_{i=1}^N (x_i - \bar{x})^2},$$

Where  $s$  indicates standard deviation,  $N$  indicates the number of observation,  $x$  indicate independent variable and  $\bar{x}$  indicate the mean of variable.

Median indicates middle value of the data, mode is the value that occurs most often while range is the difference between the highest and the lowest values.

### Compare Mean Analysis

Compare mean analysis can be used to evaluate whether there are significant differences between several group means of the dependent variable. This analysis can be done by using one-way ANOVA. When the overall F test was significant (meaning, significant differences were detected among the three groups or p-value or Sig <  $\alpha$ ) Post-hoc tests were needed to determine which differences among the pairwise comparisons were significant.

### Pearson Correlation

Correlation Coefficient ( $r$ ) can be used to analyze to what extent one variable is related to another. Pearson correlation coefficient is used for nominal or interval data while Spearman Correlation Coefficient is used for scale data such as rank. In SPSS analysis, Correlation coefficient ranges from the absolute value 1.00 at the highest level and 0.00 at the lowest level (Howitt & Cramer, 2008). A correlation of -1 means that there is a perfect negative linear relationship between variables; a correlation of 0 means there is no linear relationship between the two variables; however correlations are rarely if ever have the exact value of 0, 1, or -1 (Lane, 2007)

### Multiple Linear Regression

Multiple linear regression (MLR) is a statistical analysis that can be used to explore the relationships between a dependent variable and a set of independent variables (Maddala, 1977; Studenmund, 2001). The general multivariate regression model with  $k$  independent variables can be represented by equation 3.1

$$y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \dots + \beta_k x_{ki} + \epsilon; i=1 \dots n; n=42 \quad (3.1)$$

$y$  constitutes the dependent (or response) variable while  $x_1, x_2, \dots, x_k$  are the independent (or predictor) variables;  $\beta_0$  is the intercept (or constant) which indicates the value of  $Y$  when  $X$ s equal to zero;  $\beta_1, \beta_2, \dots, \beta_k$  are the slopes which indicate the amount of  $Y$  that will change when  $X$

increases by one unit;  $\varepsilon$  is denoted as error (or residual) terms distributed Normal  $N(0, \sigma_\varepsilon^2)$ , which has mean 0 and variance  $\sigma_\varepsilon^2$ .  $\varepsilon$  indicates all of the variation in Y that can not be explained by the included Xs.

The coefficient of  $\beta$ 's are estimated using ordinary least squares (OLS). To make OLS estimators be the best available, some classical assumption that usually used are:

**a) Normality**

The error terms  $\varepsilon_i$  should be normally distributed. The normal distribution is a symmetrical, continuous and bell-shaped curve (Maddala, 1977). To check this assumption we can use normality test (QQ-plots)

**b) Independent**

The error terms are independent of past error terms or in the other words, there is no serial correlation between errors (Studenmund, 2001). The errors should be stated as

$$E(\varepsilon_i | \varepsilon_{i-1}, \varepsilon_{i-2}, \dots) = E(\varepsilon_i)$$

This assumption can be checked using Autocorrelation or Serial Correlation Test such as Durbin-Watson Test or Autocorrelation Function (ACF) Plot.

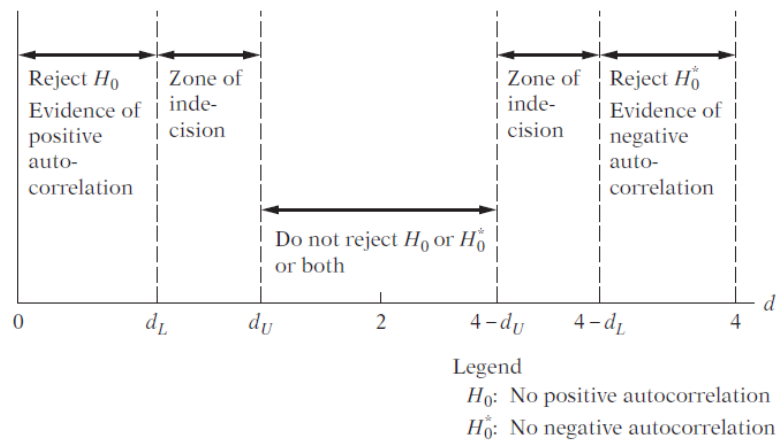


Figure 4. 3 Decision Area of Durbin–Watson Test  
Source: Gujarati (2004) p. 469

According to Gujarati (2004), the decision will be:

- There is no autocorrelation when  $d_U < DW < (4 - d_U)$
- There is positive autocorrelation when  $DW < d_L$
- There is a negative autocorrelation when  $DW > (4 - d_U)$
- No decision when  $d_L < DW < d_U$  atau  $(4 - d_U) < DW < (4 - d_L)$

**c) No Heteroscedasticity**

The variance (dispersion) of observations of the error terms should be equal (Homoscedastic) ,  $\sigma_1 = \sigma_2 = \sigma_3 = \dots$  (Studenmund, 2001) or have a random pattern in scatter plot (Gujarati, 2004). Heteroscedastic test by using plot can be used to check this assumption. Some plot's pattern can be illustrated in Figure 3.2.

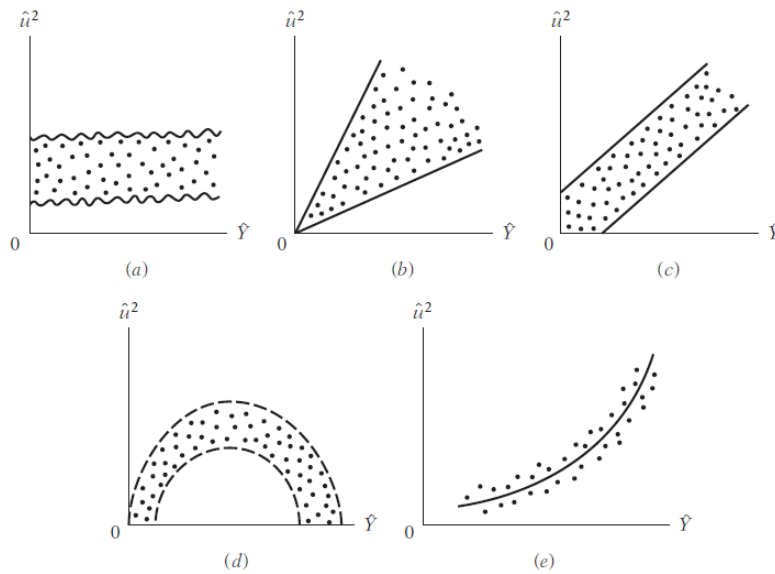


Figure 4. 4 Heterosedastic Diagnostic Plot  
 Source: Gujarati (2004) p. 402

In graphic (a) we can see no clear pattern among the independent and dependent variables meaning that there might be no autocorrelation among the data. In figure (b) to (e) we can see a clear pattern of plot meaning that there might be an autocorrelation among the data.

**d) No Multicollinearity**

The independent variables are not correlated with each other. It means that no explanatory variable which is a perfect linear function of any other explanatory variables. *Perfect collinearity between two independent variables implies that they are really the same variable, or that one is multiple of the other, and/or that a constant has been added to one of the variable* (Studenmund, 2001) p. 90. This assumption can be checked by Multi Collinearity test using SPSS menu concerning with the value of Variance Inflation Factor (VIF). VIF value > 10 indicates the existence of multicollinearity among variables and the value of VIF = 0-10 indicates no multicollinearity among variables (Kline, 2004 )

In order to find out whether the models are robust or not, some test of hypothesis are needed. The tests that are normally used:

**a) Test for Significance of the Overall Regression Model (The F-test)**

*F-test is a method to test a null hypothesis that includes more than one coefficient by determining whether the overall fit of an equation is significantly reduced by constraining the equation to conform to the null hypothesis* (Studenmund, 2001) p. 142. The hypothesis, formula and decision for this test is illustrated in Table 3.4.

Hypothesis, formula and decision for F-test

Hypothesis	$H_0 : \beta_1 = \beta_2 = \dots \beta_k = 0$ $H_A : \text{At least one } \beta_i \neq 0$
Test statistic	$F_{obs} = \frac{\frac{SSR}{k}}{\frac{SSE}{n-k-1}} \sim F_{k, n-k-1}$

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	$SSR = \sum_{i=1}^n (\hat{y}_i - \bar{y})^2 = \text{Sum Square Regression}$
	$SSE = \sum_{i=1}^n (y_i - \hat{y}_i)^2 = \text{Sum Square Error}$
Decision	Reject $H_0$ if $F_{obs} > F_{k,n-k-1}$ or p-value (sig.) $< \alpha$ <ul style="list-style-type: none"> <li>▪ Thus we believe we have sufficient evidence to conclude that at least one of the <math>\beta</math>'s is not zero</li> </ul>

---

**b) Test on Individual Regression Coefficients (t Test)**

Test on Individual Regression Coefficients (t Test) is intended to help the researcher to make inferences about particular population coefficient based on estimated obtained by sample (Studenmund, 2001). The hypothesis, formula and decision for this test is illustrated in Table 3.5.

Hypothesis, formula and decision for t-Test

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Hypothesis	$H_0 : \beta_i = 0$ $H_A : \beta_i \neq 0; i = 1, \dots, k$
Test statistic	$t_{obs} = \frac{\hat{\beta}_i}{se(\hat{\beta}_i)} \sim t_{\alpha/2, n-2} \quad se(\hat{\beta}_i) = \text{standard error of } \hat{\beta}_i$
Decision	Reject $H_0$ if $t_{obs} \leq -t_{\alpha/2, n-2}$ or $t_{obs} \geq t_{\alpha/2, n-2}$ or p-value (sig.) $< \alpha$ <ul style="list-style-type: none"> <li>▪ Thus we believe we have sufficient evidence to conclude that <math>\beta_i</math> is not zero</li> </ul>

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In this study, MLR is used to explore the relationship between urban green space performance with MSI's indicators by using backward elimination. "Backward elimination first estimates the equation all the variable in and progressively eliminate variables with partial-correlation coefficients or the t ratios or F ratios ( $F=t^2$ ) less than a specified value" (Maddala, 1977) p. 125. It means that this method will not totally ignore independent variables which have partial correlation that might give influence to dependent variables.

### Appendix 5. Coding Urban Green Spaces Based on MSI's Indicators

No	Project	Y		Internal Factor							External Factors		
				Main stakeholder/Actor involved			Role of Stakeholder (type of participation)				X8	X9	X10
		Ranking	Score	X1	X2	X3	X4	X5	X6	X7			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Abu Nuseir	1	4	3	2	2	2	0	1	0	0	0	1
2	Sterling Forest	1	6	2	0	2	0	0	0	3	2	0	1
3	San Fransisco	1	6	2	0	3	0	0	2	3	2	0	0
4	Stockholm	1	9	2	0	3	3	0	3	1	3	0	1
5	Golf Stockholm	1	8	1	0	3	0	0	3	3	2	0	0
6	Portland	1	9	2	0	3	3	3	0	0	1	0	0
7	Erlenmatt	1	9	2	2	3	3	0	0	0	2	0	0
8	Gleisdreieck	1	8	2	2	3	3	0	0	0	2	0	0
9	King's Cross Central	1	8	2	2	2	3	0	0	0	3	0	0
10	Zentrale Bahnhöfen'	1	9	2	2	2	3	0	0	0	2	0	0
11	Stadtraum Hauptbahnhof	1	8	2	2	2	3	0	0	0	2	0	0
12	Sweden	1	9	2	2	3	2	2	2	1	0	0	0
13	Beijing	1	5	3	1	1	3	3	2	0	2	0	0
14	California	1	8	1	0	3	2	0	0	3	2	0	1
15	Hongkong	1	6	3	1	0	3	3	0	3	3	0	0
16	Garnethil Park	1	9	3	0	1	3	2	0	0	1	0	1
17	Porto Alegre	2	12	1	2	2	0	2	2	2	2	1	1
18	Florence	2	14	3	0	2	0	0	2	0	3	0	0
19	Bologna	2	14	3	2	2	0	0	2	2	3	0	1
20	N.Capital	2	13	3	2	0	1	1	1	2	2	0	0
21	Milwaukee	2	15	3	1	1	2	1	0	1	1	0	0
22	Ottawa	2	14	3	0	0	2	1	2	1	1	0	0
23	Los Angeles	2	12	1	0	3	1	3	0	3	3	0	1
24	Troy Garden	2	12	1	0	3	3	3	0	3	1	0	1
25	Hongkong	2	10	3	2	0	0	2	2	2	0	0	0
26	Red River	2	11	2	0	2	2	2	0	2	0	0	0
27	USA	2	12	3	2	2	2	2	1	2	1	0	0
28	Tokyo	2	13	1	2	2	2	2	0	2	2	0	0
29	Hiroshima	2	13	2	1	3	2	2	0	2	2	3	0
30	King William Park	2	14	2	0	3	2	2	2	2	0	0	0
31	Travis Country	3	19	1	0	3	3	0	0	0	3	0	0
32	Leicester	3	17	3	1	3	3	2	0	2	2	0	0
33	Edinburgh	3	17	3	1	0	3	2	2	0	2	0	1
34	Fish Creek	3	21	3	2	3	2	2	0	1	2	0	1
35	Meewasin Valley	3	18	3	2	2	2	2	0	1	2	0	0
36	Greater Toronto	3	19	2	2	2	2	2	0	2	2	0	0
37	Singapore	3	18	3	0	1	3	2	2	2	3	3	0
38	UNP Stockholm	3	21	2	3	3	1	3	3	3	2	0	0
39	St. Petersburg	3	17	3	0	1	2	3	1	2	3	0	0
40	Montrose point	3	17	2	0	3	3	2	2	2	2	0	0
41	Don Valley	3	19	2	0	3	3	0	2	1	2	0	1
42	Brownfield Toronto	4	24	3	2	2	2	2	1	2	2	0	0
Code													
	3	When the variable is explicitly stated and mentioned as strong											
	2	When the variable is explicitly stated but not mentioned as strong											
	1	When the variable is implicitly stated											
	0	When the variable is not mentioned or explicitly stated as no											



## Appendix 6. Supporting Statement MSI's Indicator's Coding

No	Cases	Internal Factor								External Factors	
		Main stakeholder/Actor involved				Role of Stakeholder (type of participation)				X9	X10
		X1	X2	X3	X4	X5	X6	X7	X8		
State	Private	Society	Planning	Implementation	Maintenance	Input for management plan/ financial support	Regulation about green space planning	A good leadership	A good financial basis		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
1	Travis County	The comments received from the client and city officials were incorporated in more detailed master plan alternatives		The Travis County Homeowners Association requested the assistance of a collaborative design studio class students	Collaborative design; the students make the design and the client and government participated in every major decision					strict land-use control and environmental resource protection ordinances and regulations	
2	Porto Alegre	which brings together interested citizens, civil society organizations and businesses	which brings together interested citizens, civil society organizations and businesses	which brings together interested citizens, civil society organizations and businesses		commits to undertake the maintenance and gardening	commits to undertake the maintenance and gardening	define the rules for its use, participatory budgeting	Various decrees and laws about native species and tree protection		Participatory budgeting
3	Florence	Municipal bureaucracy; commune		the public and specific environmental groups seem to have gained more voice ; penioner's groups			unofficial pensioners groups who are involved in direct protection and maintenance of the gardens		green space policy became part of the recovery and reuse of the remaining real estate heritage		
4	Bologna	There have been attempts to try and incorporate private sector economic interests into green space policy. This is notable in Bologna	There have been attempts to try and incorporate private sector economic interests into green space policy. This is notable in Bologna	formal and informal groups belonging to environmental movements have acquired more force regarding green space			district committees and voluntary groups have put themselves forward for the protection and management of green areas	In Bologna this problem is being tackled through public-private partnerships, where possible, to enable limited public resources to stretch further.	green space policy became part of the recovery and reuse of the remaining real estate heritage		In Bologna this problem is being tackled through public-private partnerships, where possible, to enable limited public resources to stretch further.
5	Leicester	In both Leicester and Edinburgh, the two key sets of actors with regard to green space policy are the local authorities and local NGOs	There is also an example of public-private partnership over green spaces within Leicester; NGOs	In both Leicester and Edinburgh, the two key sets of actors with regard to green space policy are the local authorities and local NGOs (Environ)	Environ has a working group, made up of members of the public from the public, private and voluntary sector giving them opportunity to comment on policy and projects regarding green spaces	The project will include planting projects, landscape improvements, rights of way improvements, nature conservation and the interpretation of the countryside; NGOs play greater roles in construction and implementation.		Environ has a working group, made up of members of the public from the public, private and voluntary sector giving them opportunity to comment on policy and projects regarding green spaces	'green spaces' do not constitute a discrete policy field in the United Kingdom		
6	Edinburgh	In both Leicester and Edinburgh, the two key sets of actors with regard to green space policy are the local authorities and local NGOs	The Trust aims to encourage the private sector to invest in these structures	In both Leicester and Edinburgh, the two key sets of actors with regard to green space policy are the local authorities and local NGOs (Edinburgh Greenbelt Trust)	Strategy was compiled on the basis of input from voluntary organizations, including NCCS, Scottish Wildlife Trust, Edinburgh Wildlife Group, Lothian Regional Council and World Wildlife Fund	The Edinburgh Green Belt Trust work has included the planting of 40,000 trees, its involvement in a number of conservation projects, the creation and improvement of footpaths, the rebuilding of walls, establishing hedgerows and restoring derelict land	Improvement of footpath	The Trust aims to encourage the private sector to invest in these structures	'green spaces' do not constitute a discrete policy field in the United Kingdom		For effective implementation of the Strategy an Advisory Group is established, the purpose of which is to monitor progress in developing action programmes; to secure funding for programmes

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
7	Jordan	Local municipal authority	Private developer of Abu-Nuseir		Decisions about the planning of neighborhoods in Jordan are centralized. They fall within the responsibilities of the local municipal authorities; Developer design the neighborhood		Poor design and poor maintained				
8	Sterling Forest	New York State		philanthropic				Management/funding: government agencies (including the State of New Jersey and the U.S. Department of the Interior), land conservancies, and private philanthropies; 40 groups in metropolitan New York formed the Public-Private Partnership to Save Sterling Forest; charitable foundation; The 1998	regional plan, A Region at Risk, which called for a renewed effort at preserving open spaces, including Sterling Forest		
9	San Francisco Bay	the Sonoma County Agricultural Preservation and Open Space District;		These UGBs were promoted mostly by a private advocacy group, Greenbelt Alliance; Open Space District			to protect open space....	The state and philanthropists provided some funds for green space acquisition;	a recommendation in the county's 1989 General Plan, in 1990 the county's voters approved a quarter-cent increase in the county's sales taxes to fund farm land and open space protection		the Open Space District committed itself to doubling the amount of acreage protected in five years; to protecting property in all four categories; and to expending \$10 million per year (Sonoma County 2000)
10	National Capital Greenbelt	federal and local government,	Private corporation		Federal = development and management.	Federal = development and management.	Federal = development and management.	Implementation and management: Federal = development and management. Local = management of facilities. Private = land management	It was intended that the Greenbelt would be created through municipal zoning; National capital greenbelt is part of comprehensive plan for the capital Canada and administered by federal government		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
11	Fish Creek Provincial Park	Provincial government	Lombard North Group Ltd., landscape architects and environmental planners	Citizen's advisory committee, management committee (bi-level steering committee), Lombard North Group Ltd.)	public hearing; private/consultant = comprehensive planning study		The operation and management of Fish Creek Provincial Park is oriented.....		The operation and management of Fish Creek Provincial Park is oriented.....	Land use control; a development freeze	Fiscal constraint in 1990, however there were some innovative measures such as securing easement, cooperative agreement with private land owner and coordination with local authorities
12	The Meewaasin Valley	Province and The City of Saskatoon	Raymond Moriyama Architects and Planners	community and university groups, residents and community leaders	In 1978, the firm Raymond Moriyama Architects and Planners was retained to assist in the preparation of a 100 year conceptual plan		Professional staff and technical advisors are responsible for implementation and management of the greenway		Professional staff and technical advisors are responsible for implementation and management of the greenway	Land use rights are prescribed through comprehensive zoning by laws and development control= prone to public opposition	
13	Greater Toronto Bioregion greenway	Royal Commission; Ministry of environment, local government; provincial authority;	Private land owners	Community Greenway Alliances; Waterfront Regeneration Trust;	Land use control is proposed through partnerships or agreement with public agencies and private land owners		A priority project of the Waterfront Regeneration Trust is to proceed with the implementation of the Lake Ontario Greenway Strategy (LOGS)		Community Greenway Alliances have been proposed to monitor implementation and management	Ontario Environmental Protection Act to prevent encroachment in sensitive environmental areas will serve to protect the proposed greenway system	
14	Brownfield Toronto	Planning and Park Department; Toronto Region Conservation Authority;	private sector stakeholders;	non profit representatives; philanthropic;	and design and implementation by public funds.		Most of the projects were done by public sector	Plantings, maintenance, monitoring, and education activities are currently funded by the city, the Conservation Authority, and various private sources	Local philanthropist provides fund for Yo-Yo Ma,	there is no provision in the legislation for encouraging the creation of green space from such lands	
15	Milwaukee	Milwaukee County, State of Wisconsin	business association, developer; volunteers	volunteers	Much of the background planning for greenway corridors is done by the Southeastern Wisconsin Regional Planning Commission		The original routing for a paved bike trail through the parkway system was developed in 1939 by a group of bicycle enthusiasts; business association (in Hank Aaron state trail); the trail is also supported by groups of volunteer		The state of Wisconsin has played a major leadership and funding role	Whitnall's plan ; policies to avoid utility service extensions that support inappropriate urban development in the corridors	
16	Ottawa	city of Ottawa and the National Capital Commission			The city of Ottawa is the main actor in greenway development	The city of Ottawa is the main actor in greenway development	The city of Ottawa is the main actor in greenway development	The city of Ottawa is the main actor in greenway development	The city of Ottawa is the main actor in greenway development	In 1991 Ottawa developed a greenway plan incorporating into its official plan	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
17	Los Angeles	The City of Los Angeles		NGOs and philanthropist	In so doing, environmental nonprofits have also influenced the definition of parks and open space in the area, and shaped the ideology of what kinds of parks and open spaces are appropriate and where, and affected land-use decisions through mobilizing fiscal resources for the purchase of land and/or the refurbishment of park and recreation facilities;	Wealthy local businessmen such as John Bixby, oil tycoon and founder of Long Beach, also created other parks through gifts			In 1896, Griffith J. Griffith, a successful gold speculator, gave the City of Los Angeles five square miles of rugged land for "a place of recreation and rest for the masses;	Proposition 13: tax, funding	Additional funding from philanthropist
18	Singapore's Greenway	Working groups: Land Transport authority, Traffic Police, Housing Development Board, Town Councils, Urban Redevelopment authority; National Park Board (responsible for greenway)		Community Leaders; ublic involvement in greenway planning and implementation is comparatively lower	National park officel worked jointly with community leaders to launch and popularize each new section of greenway; getting feedback from the community; government established the guidelines; the grassroots leaders whose interest in the project was stimulated into active mode by the public response	The pilot project was completed in August 2002....	Parks officers making scheduled spot checks throughout the day during the week and week ends over a period of half a year would make observations on usage patterns		Such feedback is channeled to decision makers via the Garden City Action Committee and political channels, which, in turn, enables decision makers to direct more resources to the program. This allows the basic design concept to be improved	Garden City Action	The genesis of Singapore as a Garden City dates from 1963 with the launch of Tree Planting Day by the architect of the new nation, then Prime Minister Mr Lee Kuan Yew
19	Stockholm National Urban Park (Mixed woodland area)	decision making on land cover change is still highly centralized with the municipalities		Ecopark Movement, consisting of some 60 civil-society organization	it was the political action of the movement that gave identity to the area and shaped the transformational change leading to its legal protection in 1995	Voluntary: The movement, and similar forms of collective action, highlight crucial processes in civil society in both creating and providing protection for urban green areas	it was the political action of the movement that gave identity to the area and shaped the transformational change leading to its legal protection in 1995		it was the political action of the movement that gave identity to the area and shaped the transformational change leading to its legal protection in 1995	Legal Protection in 1995	different land trusts have financial and technical resources;

(1)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(13)	(14)
20	Troy Gardens				MACLT and UOSF have teamed together with several other organizations to preserve a site in a city neighborhood for a combination of open space and affordable housing; The plan was accepted by City Planning Department	MACLT and UOSF have teamed together with several other organizations to preserve a site in a city neighborhood for a combination of open space and affordable housing; The plan was accepted by City Planning Department		because of the different foci of the two land trusts, they have access to very different pools of financial and technical resource; the current status of the land is that it is publicly owned but privately managed, albeit with management strongly influenced by Northside residents	Both land trusts have collaborated with government agencies on a fairly regular basis, however, they have rarely worked together	because of the different foci of the two land trusts, they have access to very different pools of financial and technical resource
21	Stockholm Golf Course	Government: has access to policy		Golf Club			Green area managed by local users, golf course management	Green area managed by local users, golf course management	protected areas and physical-planning structures (e.g., "green belts" and "green wedges") constitute the dominant approaches	
22	National Urban Park, Stockholm		private sector: proprietor	69 Local user and interest groups (Local stewards and local stewardship associations)	the municipality government acts as land developer responsible for land use planning;	the municipality government acts as land developer responsible for land use planning;	local stewards in the governance play an important role in sustaining the flow of this ecosystem service	of these 69, 25 are local stewardship associations that have a direct role in managing habitat within the park that sustain such services as recreational landscape, seed dispersal, pollination	Since 1995, the park has been governed by a specific law under the Swedish Environmental Code as an area of national interest	
23	Urban core spreading around Victoria Harbour (Hong Kong)		Private developer		The Executive arm of the Urban Council is the main player in the urban greening agenda;	planting program in informal green space by private developer	the government looks after urban park	the government recently commissioned a tree census of 10 major urban parks	In Hongkong no guideline exists for greenery provision; there is no obligatory setback requirement and little attempt to urge voluntary compliance; regulation is particularly for public sites	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
24	Red River Valley Greenway	Government		residents, foundation, universities	The project was initiated by the Clarence G. Schilling Memorial Fund, administered by the Fargo-Moorhead Area Foundation. Local activities include demonstration gardens, comprehensive corridor planning, habitat analysis, and revegetation studies; 4 research studies	Local activities include demonstration gardens, comprehensive corridor planning, habitat analysis, and revegetation studies; 4 research studies		Clarence G. Schilling Memorial Fund, utilize the funds for wildlife conservation and preservation, and for education in the Fargo-Moorhead metropolitan area			
25	America	Government = main actor;	private sector and community involvements were slightly at the end of process;	private sector and community involvements were slightly at the end of process;	community: e.g. consultation forums, design charettes, working groups, committees, site visitations and educational tours	Developers, landowners and other private-sector participants were involved in slightly over half (11) of the projects, both directly (site construction or property donation) and indirectly (co-ordination of projects)	Non-governmental agencies, such as land trusts, and community and environmental associations also played an active role in raising awareness of the need for the projects and in helping to push them forward	Developers, landowners and other private-sector participants were involved in slightly over half (11) of the projects, both directly (site construction or property donation) and indirectly (co-ordination of projects)	In 1995, the US EPA put forward the Brownfields Action Agenda;		government support is the onl source of funding
26	Portland	City Government		City Repair Project (NGO); residents	...to discuss urban design strategies for their communities. These activities included workshops with public presentations at community centers and neighborhood associations, discussions with neighborhood groups and city officials, and door-to-door outreach. Proposed idea were then submitted to the City for permission	these innovative urban interventions—envisioned , designed, permitted, and installed by community members with the support of the City Repair Project.			The city grid pattern		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
27			Tokyo Landscape Contractors	volunteer		Large urban parks were created as a result of the war as large parcels of land became available from the Imperial and military ownerships; Makino was restored through the efforts of Mr. Tokitaro Kasuga, a Tokyo landscape contractor; In 1948 Mr. Kasuka volunteered to replant the street trees along the Avenue		new supplies of trees became available from the city owned nurseries	Urban park planning for Tokyo started in 1885; The new constitution....		Lack of financial basis...
Tokyo											
28	Hiroshima	Creative major	Tokyo design Firm	citizen	In 1950 the city sponsored a design competition for the Peace Park	Street tree plantings started in 1950; Thousands of citizen participate in tree planting		In 1954 the then mayor, Shinzo Hamai, appealed to all mayors in Japan to donate trees to plant in Peace Park	the 1949 Hiroshima Peace Memorial City Construction Law	The mayors of Hiroshima provided important leadership in the reconstruction of the city and its urban forest	
29	King William Park, Fremantle, Australia	Local government		FINCA (experts and citizens)	FINCA : stewardship and hold public consultation	FINCA acted as a facilitator in making the community garden at King William Park.	maintained by the ongoing work of many FINCA members and residents	government : help in Funding			
30	Erlenmatt	Municipal government	developers	citizens and residents, and nature conservation experts from the administration or non-governmental agencies	The slogans created for the advertising of the sites in Basel, Berlin and Munich by Vivico Real Estate address the symbolic value of green areas even more directly. Citizen: This was reflected in the run-up to an official public poll on the redesignation of the area, in which the image of a conventional neighbourhood park allowing intensive use was widely promoted in the press and on campaign posters; official public poll in designation area was strong just like Berlin				All three conservation strategies are being implemented through the use of legal policies		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
31	Gleisdreieck	Municipal government		citizens and residents, and nature conservation experts from the administration or non-governmental agencies	The slogans created for the advertising of the sites in Basel, Berlin and Munich by Vivico Real Estate address the symbolic value of green areas even more directly. Citizens' ideas for the park were collected by the municipality through a representative survey with residents of the neighbouring areas, group interviews and a three-week long online discussion					All three conservation strategies are being implemented through the use of legal policies;	
32	King's Cross Central	Municipal government	developers	citizens and residents, and nature conservation experts from the administration or non-governmental agencies	the developers accentuate that they are 'keen to capitalise upon the canal's positive contribution to "King's Cross Central" and see redevelopment as an opportunity to bring life to the canal, enhance its character, wildlife value and recreational use and improve access and safety; this is mostly done by experts or specific environmentalist groups engaged in such participatory processes					national legislation that specifically regulates nature conservation on brownfields formerly used by the rail	
33	Zentrale Bahnflächen'	Municipal government	developers	citizens and residents, and nature conservation experts from the administration or non-governmental agencies	The slogans created for the advertising of the sites in Basel, Berlin and Munich by Vivico Real Estate address the symbolic value of green areas even more directly					All three conservation strategies are being implemented through the use of legal policies;	



(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
34	Stadtraum Hauptbahnhof	Municipal government	developers	citizens and residents, and nature conservation experts from the administration or non-governmental agencies	this is mostly done by experts or specific environmentalist groups engaged in such participatory processes						All three conservation strategies are being implemented through the use of legal policies;
35	the city of St. Petersburg	Danish and Russian partners: The main beneficiary and partner on the Russian side was the St. Petersburg's Department of Gardens and Parks (DGP), while the other main Russian counterpart was the St. Petersburg State Forest technical Academy (FTA). The Danish Forest and Landscape Research Institute (DFLRI, now the Danish Centre for Forest, Landscape and Planning) acted as project coordinator. On the Danish side they were supported by an NGO, the Danish Outdoor Council (DOC); state dominant in design		On the Danish side they were supported by an NGO, the Danish Outdoor Council (DOC)	The project had three main components: (1) the development of a GIS-based information system to assist green-space planning and management; (2) (3) awareness raising and public involvement activities;	on-site improvements in selected green areas and implementation activities were regarded as important in making the project 'visible	on-site improvements in selected green areas	funding: funding from the Danish Ministry of the Environment; Restoration and	A critical reflection can be that during the activities, the city's restoration policy was not questioned		Lack of funding is the primary concern
36	Sweden	Government	Housing company	user groups, residents	but also tasks such as planning and designing the yard, or arranging social events for the neighbours; planning by private: the housing company looked for new ways of involving the residents	doing practical work tasks such as planting	weeding, lawn moving, painting etcetera,	user groups engaged in the development of management of a yard, playground, garden or such			in 1990s the government initiated Green Living Yard
37	Beijing	Beijing Municipal government; the administrative framework of the greenbelt takes top down approach	Developers	Community/farmers	government agencies involved in the greenbelt program to increase the scale and speed of tree planting	community/farmers: tree planting in green belt area	District government check the result of tree planting				Greenbelt policy

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
38	The Packard Foundation's Conserving California Landscape Initiative (CCLI)			society (philantropis/foundation)	Another CCLI strategy was to orient the entire program around partnerships with a broad array of stakeholders			Through Packard's program-related investments (PRIs), low-interest bridging loans were provided to local nonprofits and public agencies	Proposition 13		
39	Hong Kong		developers		The development and management of public recreation space in the New Territories had remained the sole responsibility of the government bureaucracy until after the Regional Council, the rural counterpart of the Urban Council, was set up in 1985.	The substitution of CDA zone for "Open Space" suggests that the government tended to encourage privatization of public space within comprehensive land development in the four New Territories sub-regions		The development and management of public recreation space in the New Territories had remained the sole responsibility of the government bureaucracy until after the Regional Council	it easier for the government to maintain a flexible stance on any particular planning proposals, especially about those non-revenue generating projects such as public open space.		
40	Garnethil Park, Glasgow	City council; Park and Recreation Department		The community were not involve in making the plan but present to their agreement (tokenism)--collaboration just in planning	This general image has been further constructed by the City Council to reflect Garnethill and by association the City of Glasgow, as a " socially heterogeneous and socially complex place; public consultation about park development began in one week oktober 1989, however the plan was already in place.	When the idea for a park emerged, the Parks and Recreation Department of Glasgow City Council began to look for appropriate sites			Policy about culture regeneration strategy (implicit)		The City Council allocated £20 000 per annum towards the upkeep of the park

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
41	Parkland along Chicago Lakefront (Montrose Point) restoration project	Park District		groups of individuals identified as principal stake-holders of the point and its adjacent areas: birders and other environmentalists, historic preservationists and landscape architects, passive users, volleyball players, anglers, and yacht club members	Dialogue with stakeholders to identify vision of nature suitable for park restoration; focus group discussions in the fall of 1997 with six groups of individuals identified as principal stake-holders of the point and its adjacent areas: birders and other environmentalists, historic preservationists and landscape architects, passive users, volleyball players, anglers, and yacht club members	Birders began working to restore the hedge in the mid-1980s by planting additional honeysuckle shrubs; middle: seeding old road bed with prairie grasses, 1996; bottom: planting prototype savanna bed, Montrose Point Youth Project, 1999	Participatory ecological restoration activities at Montrose Point. Top: pruning and weeding of the Magic Hedge, 1994	Again, birders worked with the park district to leave the point unmown over the last few years, but are now somewhat divided as to how it should be further managed		The plan also set the stage for more detailed, place-specific plans to be accomplished under the policy framework it established	
42	Don Valley Brick Works	Toronto Region Conservation Authority		Community stop the idea....Public input in design process, NGOs	Toronto Region Conservation Authority (TRCA) and community stop the idea of site development; public input in design process			In its early years the ecologically restored Brick Works site was managed by the TRCA, but is currently co-managed by the City of Toronto's Parks and Recreation Department and Evergreen, a Canadian non-governmental organization that strives to conserve natural and cultural landscapes in public and private local;		Don Valley Brick Works Master Plan	Wealthy neighbourhood local donors supporting the conservation effort

- 3 When the variable is explicitly stated and mentioned as strong
- 2 When the variable is explicitly stated but not mentioned as strong
- 1 When the variable is implicitly stated
- 0 When the variable is not mentioned or explicitly stated as no

## Appendix 7. Chi-Square test

### Country and Level of Performance

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	45.179 <sup>a</sup>	42	<b>.341</b>
Likelihood Ratio	50.281	42	.178
Linear-by-Linear Association	.660	1	.416
N of Valid Cases	42		

a. 60 cells (100.0%) have expected count less than 5. The minimum expected count is .02.

Source: Own Data Analysis

Chi-square test was run to see whether urban green spaces locations influence their performances. The hypothesis in this test are:

$H_0$ : There is no a significant relationship between Country and Level of Performance.

$H_a$ : There is a significant relationship between Country and Level of Performance.

As shown in the result of Chi-Square Test in Table 4.2, For confidence interval 95%, the p-value (Sig) of Pearson Chi-Square is 0.341 which is more than  $\alpha$  ( $\alpha = 5\%$ ). Based this value, we have to reject  $H_a$  and accept  $H_0$  that there is no significant relationship between Country and their level of UGSP.

### Project Year and Level of Performance

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	32.221 <sup>a</sup>	21	<b>.056</b>
Likelihood Ratio	33.810	21	.038
Linear-by-Linear Association	1.379	1	.240
N of Valid Cases	42		

a. 29 cells (90.6%) have expected count less than 5. The minimum expected count is .02.

Source: Own Data Analysis

Chi-Square test was done to see whether the year of projects significantly influence UGSP. The hypotheses of this test are:

$H_0$ : There is not a significant relationship between Project Year and Level of Performance.

$H_a$ : There is a significant relationship between Project Year and Level of Performance.

The result of Chi-Squared test as shown in Table 4.3 indicates that for Confidence Level: 95%, the p-value (Sig) of Pearson Chi-Square= 0.223 which is more than  $\alpha = 5\%$ . Based on this result so have to reject  $H_a$  and accept the null hypothesis ( $H_0$ ) meaning that there is no relationship between Project Year and Level of Performance.

### UGSP and Types of Urban Green Spaces

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.567 <sup>a</sup>	21	<b>.223</b>
Likelihood Ratio	29.338	21	.106
Linear-by-Linear Association	.484	1	.487
N of Valid Cases	42		

a. 32 cells (100.0%) have expected count less than 5. The minimum expected count is .05.

Source: Own Data Analysis

To check whether urban green space types significantly influence these UGSPs, Chi-Square was also run. The hypotheses are:

- Ho: There is not a significant relationship between Green Space Type and Level of Performance.
- Ha: There is a significant relationship between Green Space Type and Level of Performance.

As shown in Table 4.4, the result of Chi-Square test indicates that for Confidence Level: 95%, the p-value (Sig) of Pearson Chi-Square= 0.223 which is more than  $\alpha = 5\%$ . Based on this value we have reject Ha and accept the null hypothesis (Ho). meaning that there is no relationship between Green Space Type and Level of Performance. Based on this result, it is argued in this study that different types of urban green space didn't influence their performances.

## Appendix 8. SPSS Syntax of Cochrane-Orcutt Estimation Method

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AREG Performance WITH State Society Implementation Regulation  
/NOCONSTANT  
/METHOD=CO.
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