

## **Social Capital and Sustainability of Urban Environmental Groups in Perth**

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## **ABSTRACT**

Community based environmental groups have become an integral component of urban environmental stewardship initiatives in Perth metropolitan area. While the utility of Urban Environmental Groups (UEGs) has been recognized by several environmental policies and programs, the challenges of sustaining UEGs remain under-explored, especially, in Western Australia. This paper responds to this gap and explores the prospect of UEGs' sustainability through the lens of social capital. The findings of a quantitative survey of 81 groups as well as qualitative observations suggest UEGs that are better at building and maintaining social capital are more likely to overcome resource-scarcities and sustain over time. Based on the findings, the paper views social capital as a necessary ingredient of sustainable community groups and discusses the strategic needs to support UEGs.

## **INTRODUCTION**

Community groups have been globally considered a reliable partner by the state agencies and the private sector in addressing economic, environmental and societal challenges. It is believed that hundreds of thousands, if not millions, of community groups around the world are now actively engaged in various environmental activities (Hawken 2007). In Australia, it is estimated that at least 5,000 community groups of various kinds, such as, Catchment groups, Care groups (i.e. BushCare, CoastCare, LandCare, RiverCare), Watch groups (i.e. CreekWatch, WaterWatch), Friends groups, Foundations, Societies and etcetera are specifically involved environmental activities (Youl et al 2006). These formal or informal community groups/organizations/associations that operate for the public benefit to care for, conserve, preserve, maintain and aware/educate about the environment in an urban setting are referred to as — Urban Environmental Groups (UEGs).

Compared to similar groups operating in the rural context, ideologically, UEGs are less rooted in social movements and more in accessing the rights to space (Svendsen & Campbell 2008). In addition, UEGs are generally involved in site specific actions in public space instead of catchment specific actions in private property (Stenhouse 2005). The contributions of UEGs towards restoring or maintaining locally significant ecosystems within public space are imperative in cities like Perth where two-third wetlands/bushland ecosystems have been lost in the past 150 years and the remnant ecosystems are continually under threat from the potential redevelopment (Davis & Froend 1999, Stenhouse 2004). UEGs often start-up when friends, neighbours and other

community members share a common interest in a particular environmental issue and decide to do something about it collectively. The functioning of these groups is therefore based on the notion and practice of volunteering where community members provide time and energy towards activities like regeneration of bushland and cleaning up waterways. However, yielding desirable environmental outputs depend on the sustained inputs in the forms of long term commitment and access to human and financial resources. While environmental programs such as, Natural Heritage Trust, Bush Forever, and Urban Nature have partnered with and/or supported UEGs on ad hoc basis, sustaining UEGs have become increasingly difficult for a couple of reasons. First, the significance of voluntary contributions are often under-appreciated by the state agencies, making the business of recruiting new volunteers and retaining existing ones difficult (Safstrom & O'Byrne 2001). Second, a recent policy shift towards regional-level environmental governance has substantially reduced the availability of funding opportunities for the locally operating UEGs (Paulin 2007).

Theoretical underpinnings of 'resource-dependence' (Pfeffer & Salancik 1978) as well as 'social networks' (Wasserman & Faust 1994) propose capability to build and maintain social capital as a key to overcome resource scarcities. Not surprisingly, a growing body of literature has associated social capital with the vitality of community groups (Passey & Lyons 2006, Saxton 2007) and the capability of community groups to yield better environmental outcomes (Pretty & Ward 2001). The importance of social capital in sustaining community based environmental groups in Australia has been fairly discussed in the rural context (Sobels et al 2001, Webb & Cary 2005). Since the UEGs specific related studies are scarce (Davison 2005, Davison & Ridder 2006),

sustainability of UEGs remains virtually an unexplored topic. This paper therefore responds to this gap and describes the preliminary findings of a survey developed to explore the nexus between social capital and UEGs' sustainability. The paper begins with an overview of sustainability in the context of community groups, followed by the notion of social capital. The paper then summarizes the design and dissemination of the survey as well as its key findings. It concludes with the discussion on the implications of findings and strategies to sustain UEGs.

### **Sustainability**

The notion of sustainability is closely linked to sustainable development – ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED 1987, p. 8). However, sustainability remains an ambiguous notion because it has different context dependent connotations with hundreds of definitions (Johnston et al 2007). While an extensive review of sustainability is beyond the scope of this paper, the overarching ethos is that any resources needed to initiate and continue a process should eventually be replaced or replenished by that same process. Since the study concerns UEGs' sustainability, the literature on sustainability of community organizations is rapidly reviewed next.

There are two distinct schools of thought in regards to sustaining community organizations. The first considers the optimal management of internal resources and attracting sufficient external resources in order for the organizations to keep going in an effective manner (Sobeck et al 2007, McPhee & Bare 2001). Fowler (2000) emphasized the regenerative quality of organizations to enable change and adaption to the external

environment and suggested that it was important for organizations to not only utilize resources wisely but also adapt to the varying availability of resources. Hence sustaining organizations, at least partially, depends upon UEG's capability to not only manage available resources but also to yield outcomes of sufficient value to a broader community in order to ensure the future availability of resources (Brinkerhoff & Goldsmith 1992). The other school of thought concerns the operating environment of community organizations. Ostrom (2005) suggested that the tendency for policymakers to assume 'one size fits all' and the availability of funds from external agencies with little or no requirement for in kind or monetary inputs of recipients will hinder the sustainability of these community groups. Similarly, Annis (1987) metaphorically differentiated community organizations from the wild-flowers and suggested that unlike wildflowers, community organizations are less likely to sustain on their own, and that a just policy environment and competent state agencies are needed to cultivate and sustain these organizations. It is clear that the harmonious relationship between UEGs and state agencies has the potential to facilitate continuous positive feedback mechanisms where groups are able to acquire enough inputs (from the environment it operates in) and yield outputs of sufficient value (to the community and the state) which help to sustain the group. It is in this context that the notion of social capital is discussed next.

### **Social Capital**

Social capital has emerged as one of the more dominant themes across a number of disciplines in recent years. The central idea behind the notion is that social ties or relationships are valuable for the longevity of organizations. However, like the notion of

sustainability, social capital remains an ambiguous concept with multiple descriptions and dimensions.

One of the early proponents of social capital in recent decades, Pierre Bourdieu (1986) described social capital as ‘the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationship of mutual acquaintance or recognition’(p. 248). Robert Putnam (1995), who is often credited with popularizing social capital, portrayed social capital as ‘features of social organization such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit’ (p. 67). At the same time, Francis Fukuyama (1995) emphasized ‘trust’ as a major characteristic of social capital and described it as ‘the capability of people to work together for the common purpose’ (p. 45). Last but not least, an advocate of the network theory of social capital, Nan Lin (2001) characterized social capital as ‘resources embedded in social networks accessed and used by actors for actions’ and suggested that ‘actors access social capital through interactions, to promote purposive actions’ (p. 25).

There are also multiple dimensions and levels of involvement in the notion of social capital and Granovetter (1973) distinguished the nature of relationships according to the intensity of ties; strong ties (with close family and friends) and weak ties (with acquaintances). He suggested that while strong ties provide more intense social support, weak ties increase access to diverse information, resources and jobs. Building on Granovetter’s assertion, social capital has been differentiated into two tiers: (a) bonding and (b) bridging (Gittel & Vidal 1998, Putnam 2000). Bonding represents horizontal

(usually strong) ties between like-minded actors. Bridging represents vertical (usually weak) ties between socio-demographically different actors. Bonding or bridging characteristics of social capital are considered to be significant for an actor to 'get by' or 'get ahead' respectively (Woolcock & Narayan 2000, Woolcock & Sweetser 2002). While it is evident that the recurring theme amidst the varying descriptions and dimensions is the interactions necessary to maintain network ties and build trust, we need to differentiate between individual and organizational social capital before adopting a working definition for the purpose of this paper.

Organizations like UEGs are more or less social entities created and sustained by interactions, enabling collective actions that would not be possible through individual efforts alone. Consequently, Pennings and Lee (1999) suggested that since organizations are embedded in a web of social ties, the social capital of organizations constitutes a distinctly collective asset that might be mediated by the individuals involved in organizations i.e. leaders or staff, but which is uniquely organizational in nature. It is however important here to acknowledge that multiple contexts, definitions and dimensions associated with the notion reifies rather an abstract concept. Social capital is intangible and unlike financial capital or human capital, it does not consist of resources held by individuals or by organizations but of processes of interactions leading to desired outcomes (Bankston III & Zhou 2002). Hence, as depicted in Table 1, social capital is construed as a metaphor that encapsulates intensity and intentions of intra and inter organizational interactions as proxy indicators of trustworthy relationships.

## **TABLE 1 HERE**

### **METHOD**

#### *Study area and sample size*

The Perth Region in Western Australia (WA) is spread over an area of 770,000 hectares, about half of which is the Perth metropolitan area with a population of 1.5 million. There are about 400 UEGs in the region, either established directly through local community's commitment to a particular space or as a result of encouragement from agencies to provide more formal representative groups covering catchments and neighbourhoods (O'Byrne 2006). However, a comprehensive list of UEGs does not exist (other than an out-of-date directory published by Swan River Trust in 1996). A conservation directory maintained by Swan Catchment Council (now Perth Region NRM) listed approximately 150 community organizations in the region and their contact details (retrieved October 10, 2007 from <http://www.swancouncil.org.au>). However, the list also included organizations that were not necessarily established with environmental motives e.g. churches, community centres, childcare centres. A total of 116 community organizations met the criteria of UEGs defined earlier.

#### *Research question and survey instrument*

The central research question that this paper addresses is:

- How does social capital influence the sustainability of UEGs?

The 25 questions survey instrument was developed in order to gain a broader understanding the nexus between social capital and the likely sustainability of UEGs.

Following the ethics approval process, the mail-based and self-administered survey was carried out between June and August in 2008. One leader (either the chair, vice chair, secretary, treasurer, coordinator and so forth) from each of the 116 UEGs was requested to participate in the survey. In order to improve response rate of the mail based survey, the highly acclaimed protocol Tailored Design Method (TDM) was utilized to design and disseminate the survey instrument (Dillman 2000).

A total of 83 responses were received, of which 81 were complete and usable (a response rate of 68.9%). In order to explore the research question, descriptive statistics, frequencies, cross-tabulations, correlations and tests of statistical significance were carried out using Microsoft Excel and SPSS 16.0 software.

## **QUANTITATIVE FINDINGS**

### *Attributes of UEGs*

The diversity in scope and overlapping nature of activities made it difficult to classify UEGs in any particular order. Hence the self reported name was deemed the most appropriate way to distinguish UEGs into five groups; a) 'catchment' groups, b) 'care' groups (bushcare, coastcare, landcare, rivercare) c) 'friends' groups, d) 'conservation/preservation' groups, and e) 'others' (educational centres, foundations, societies). The majority (61.7%) of responding UEGs were 'Friends' groups and nearly 41 % UEGs were 'incorporated'. On average, UEGs had been functioning for 14.2 years, had 73.3 members, 37.1 volunteers and employed 0.5 staff. Responses indicated that UEGs in 'Other' categories were older (mean=24.20 years, sd=15.414) and larger

in terms of members (mean=309.27, sd=661.143), volunteers (mean=86.07, sd=116.665), and waged staff (mean=2.07, sd=4.652). However, nearly 63 % and 56 % of responding UEGs had less than 20 members and 20 volunteers respectively. And none of the 'friends' groups employed any waged staff. Moreover, less than one-third of the UEGs surveyed had websites (13 out of 25 had web presence through other organizations; such as environmental networks or nonprofit organizations).

### **TABLE 2 HERE**

As indicated in Table 2, 'conservation/preservation' groups reported the highest number of funding sources (mean=3.25, sd=0.5) on average. The majority (76.5%) of the UEGs indicated receiving government grants, followed by non-government grants (71.60%), and fees/donations (53.10%). In addition, 34 UEGs (42 %) also reported other sources of funding to support their activities namely: local government/council support (10), fundraising events i.e. quiz nights, bingo nights, t-shirt sales, garage sale (7), self-funding (4), payment for fees and services i.e. consultancy (4), seedlings sale (3), support from secondary and tertiary educational institution (2), facility rental (1), interest on bank deposit (1) and entry fees (1).

The activities reported by UEGs were; a) protecting and/or restoring ecosystems (86.4%), b) environmental education/awareness (81.5%), c) conserving and/or protecting biodiversity (80.2%), d) improving coastal/river health (59.3%), and e) soil

erosion/salinity management (34.6%). On average, 'catchment' groups and 'conservation/preservation' groups reported being engaged in higher number of activities (mean=5, sd=0.707 and mean=5, sd=0.816 respectively). In addition, 19 groups (23.45%) also reported undertaking 'other' type of activities, namely: tree planting (4), weed control (3), flora/fauna survey (3), rubbish removal (2), minimizing bush fire risk (2), consultancy, promoting sustainability agenda at the local council (1), contribution to environmental policy-making (1), and dieback disease control (1).

#### *Organizational affiliations/partnership*

Information on organizational affiliations with networks/peak bodies as well as partnership engagement provided a general sense of how responding UEGs built social capital. 'Catchment' groups reported the highest percentage of affiliation with local/regional networks (80%) and electronic networks (40%); whereas 'care' groups reported highest percentage of affiliation with peak/umbrella bodies (86%). 'Friends' groups in general had lesser affiliation with local/regional networks (43%), peak/umbrella bodies (50%), and electronic networks (4%). As indicated in Figure 1, the cross tabulation between types of UEGs and organizational affiliations indicated the difference in percentage of affiliation with electronic networks between 'catchment' groups (40%) and 'friends of' groups (4%) as being statistically significant [ $\chi^2$  (n=81): 9.859, df = 3, p = 0.043].

**FIGURE 1 HERE**

While all ‘catchment’, ‘care’, and ‘conservation/preservation’ groups were engaged in partnership, 28% ‘friends’ and 27% ‘other’ groups were not engaged in partnership. The nature of partner organizations varied from government agencies to national non government bodies and from banks to educational institutions.

### *Organizational interactions*

A question in the survey asked, ‘During the past twelve months, how often did your organization interact with the following?’ a) with leaders of your organization, and b) with members of your organization, c) with partner organizations, d) with local/regional networks, e) with peak/umbrella bodies, and f) with local/state government agencies. As indicated in Figure 2, on a scale of 0 to 3 (0=no interaction; 1=few times a year; 2=few times a month; and 3=few times a week), ‘catchment’ groups generally reported the higher intensity of intra and inter organizational interactions, particularly compared to ‘friends’ groups. Kruskal-Wallis test (nonparametric one way analysis of variance) detected significant differences in mean rank between interactions of ‘catchment’ groups and ‘friends of’ with leaders [ $\chi^2$  (4, n=81) = 11.544, p = 0.021] and local/state governmental agencies (the main funding source) [ $\chi^2$  (4, n=81) = 13.559, p = 0.009].

**FIGURE 2 HERE**

### *Organizational capability and sustainability*

UEGs were asked to indicate their opinion on the strength/weakness of their organization's capabilities' with options to rate five statements: a) accomplish its environmental objectives, b) adopt and utilize Information and Communication Technologies (ICTs) such as email, Internet, c) attract and retain members/volunteers, d) maintain relationship with relevant stakeholders, and, e) raise adequate funds to support its activities. The opinions were rated according to the Likert scale; very weak (0), weak (1), neither weak nor strong (2), strong (3), and, very strong (4).

'Friends' groups in general reported weaker capabilities across the board compared to 'catchment' groups. Almost 73% of responding UEGs indicated either strong or very strong capability to accomplish environmental objectives. More than 40% reported either very weak or weak capability to attract and retain volunteers as well as to raise adequate funds. Similarly, more than 66 % indicated either strong or very strong capability to maintain relationships. However, 36% of 'friends' group indicated either very weak or weak capability to adopt and utilize ICTs whereas 60 % of 'others' group indicated either strong or very strong capability.

In order to explore the prospect of organizational sustainability, respondents were asked to rate the likelihood that their organization would keep functioning until its objectives were accomplished. The majority (70.4%) indicated they it was likely that their organization would continue. A closer look at the responses revealed that all 'catchment' and 'conservation/preservation' groups were likely to continue whereas 38 % 'friends' group were either unsure or unlikely to continue.

Nonparametric correlation (Spearman Rho) test between the reported capabilities of UEGs and the sustainability prospect detected strong correlation between capability to maintain social capital and acquire human as well as financial capital ( $r_s \geq 0.5$ ). Similarly, moderate correlations ( $r_s \leq 0.49 \geq 0.25$ ) were detected between capability to adopt ICTs and maintain social capital, and to raise financial as well as human capital (Table 3).

### **TABLE 3 HERE**

#### *Qualitative observations*

Qualitative examinations of UEGs (Paulin 2007) have also identified the impact on the viability of UEGs when funding regimes were changed or withdrawn by state and federal funding authorities. Effectively, the employment of a coordinator, funded by government, changed the role of the community based group from that of a catchment based interest group, supported by local government representation, to one of employer and thus a more bureaucratic role for those community members who were diverted to deal with these issues. The social capital engendered by working together to create and keep the group going under the guidance of a committed community leader dissipated somewhat with the need to be more accountable to outside funding agencies.

With the employment of a coordinator and, later, agency encouragement to amalgamate with other groups, the attendant need to be so closely involved in organisational matters diminished and lead to a backing off and disappearing of the original leadership group along with a measure of social capital and community memory. The UEGs continue to

operate but with few 'community' members and activities were designed to fit with regional strategies and availability of volunteers from other groups like Conservation Volunteers Australia (Ibid).

When funding regimes were redrawn to eliminate the role of coordinators, though with a continuing notional need for funding applications to be community group based, volunteer office holders were difficult to find. The role of chair was taken on by a regional group officer who tried to straddle the difficulties of being employed in a particular expert role and a connected volunteer community role at the same time. While this meant that the group, through the chair, had good access to wider environmental networks they struggled with the difficulties of sustaining an emasculated group to take on the organisational roles that the coordinator had earlier been responsible for. After a year, the role of chair was taken on by a community member and the group has continued to operate, but again with great reliance on just one or two people to do the organisational work and their commitment of time to maintain connections with the environmental network and keep abreast of regional and government policies which affect them. This voluntary commitment of time is also evident in the survey results with the various activities undertaken to ensure the viability of the UEGs and thus the engendered social capital of working as a group.

## **CONCLUSION AND DISCUSSIONS**

While the exploratory nature of this work-in-progress paper was limited in scope, it does contribute towards identifying some of the contributions and challenges of UEGs

in Perth. The intent of the paper was to assess whether or not building and maintaining social capital enabled environmental community groups to be more or less sustainable. Quantitative observations revealed that social capital built and maintained through effective networking with other groups and agencies did influence the capability of UEGs to acquire resources and eventually contributed towards their sustainability. Acquiring adequate financial and human resources was certainly the primary challenge for most UEGs, yet, groups that were better at building and maintaining intra and inter organizational relationships were also more likely to overcome such challenges. This finding certainly supports the view of social capital as a necessary ingredient of UEGs that can do more with less. Depending on the scope of UEGs' objectives and activities, it might well be the case that not every single group needs to higher levels of social capital. However, the findings definitely put UEGs with more social capital in a better position to accomplish their objectives effectively and keep going over time.

Qualitative observations suggested that some UEGs were able to sustain primarily due to the ongoing leadership and commitment of only one or two members, which could be ultimately problematic for the organizational sustainability when such commitment wanes, burnout occurs or the leaders leave for other non group related reasons. In addition, if the core group of members and volunteers have become so closely identified with the group's missions, it can then be difficult to cope with changed circumstances and for newcomers to penetrate. Uslaner (2002) suggested that a predilection towards whether or not to trust others emanates from their cultural background and upbringing. 'Trusters' or 'joiners and leaders' are more likely to take people at face value and join groups like UEGs, as their parents probably did before them, whereas non-trusters tend

to belong to small, tightly bounded communities which do not easily admit strangers and whose members rarely mix with other less structured and unrelated groups (Uslaner 2002). Trust in social situations can also be linked with reciprocity which “is tied to the politically self-conscious experience of people who see themselves as citizens”(Wilkinson and Bittman 2002, p. 6).

Since UEGs have a greater interest in the well-being of the local environment and are more cognizant of the local environmental challenges; urban environmental initiatives can benefit from strategies that enable state agencies to work closely with UEGs. The role played by UEGs is vital for the future of community based urban environmental stewardship, especially, in raising awareness, informing public policy and carrying out vital on-ground work. This role should be supported and encouraged by agencies and in so doing recognising that the complexity and variety of UEGs need to be accommodated (Dovers 2000). These range from the needs of the more bureaucratic and well connected ‘other’ larger groups, down to the smaller ‘friends’ groups which the survey suggested do not have the same desire or the capability of maintaining interactions within and between organizations. While further qualitative studies in order to unpack how greater investment in social capital influences the organizational sustainability is necessary, it is clear that government programs which provide long term strategic funding (instead of the current ad hoc and short term funding regimes) has the potential to enable UEGs to more effectively retain or attract volunteers. Similarly, although community organizations generally invest less in technologies, assisting UEGs to better position themselves to benefit from mundane ICTs such as email, websites and blogs could be particularly worth exploring.

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## FIGURES and TABLES (in chronological order)

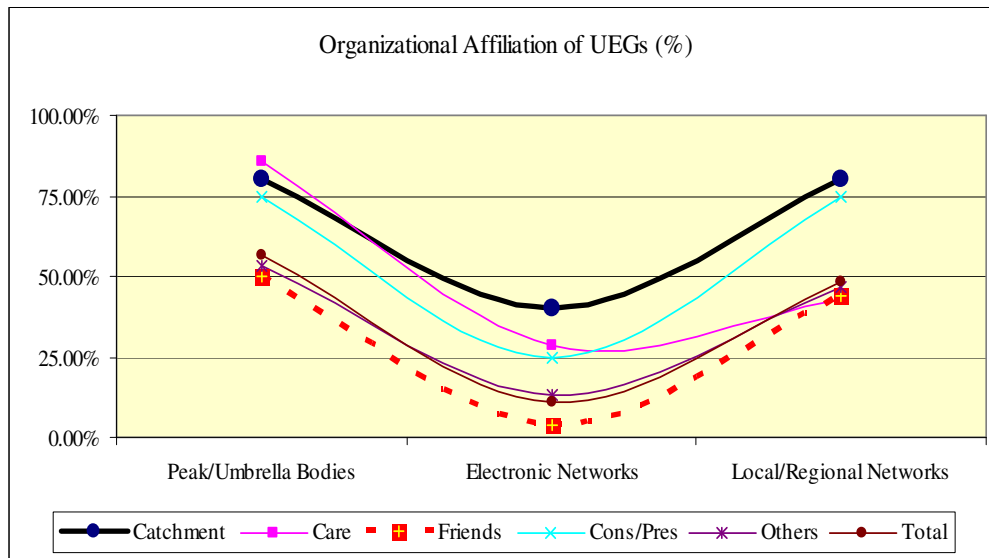
**Table 1**

<b>Table 1: Social capital framework</b>		
<b>Outcomes</b>	Identification of resources (or the lack of it)/ Intra-organizational trust	Acquisition and utilization of essential resources towards sustaining UEGs / Inter-organizational trust
<b>Process</b>	UEGs' interactions with leaders, members, and staff	UEGs' interactions with networks, partners, peak bodies and governmental agencies
<b>Social Capital</b>	<i>Intra-organizational</i>	<i>Inter-organizational</i>

**Table 2**

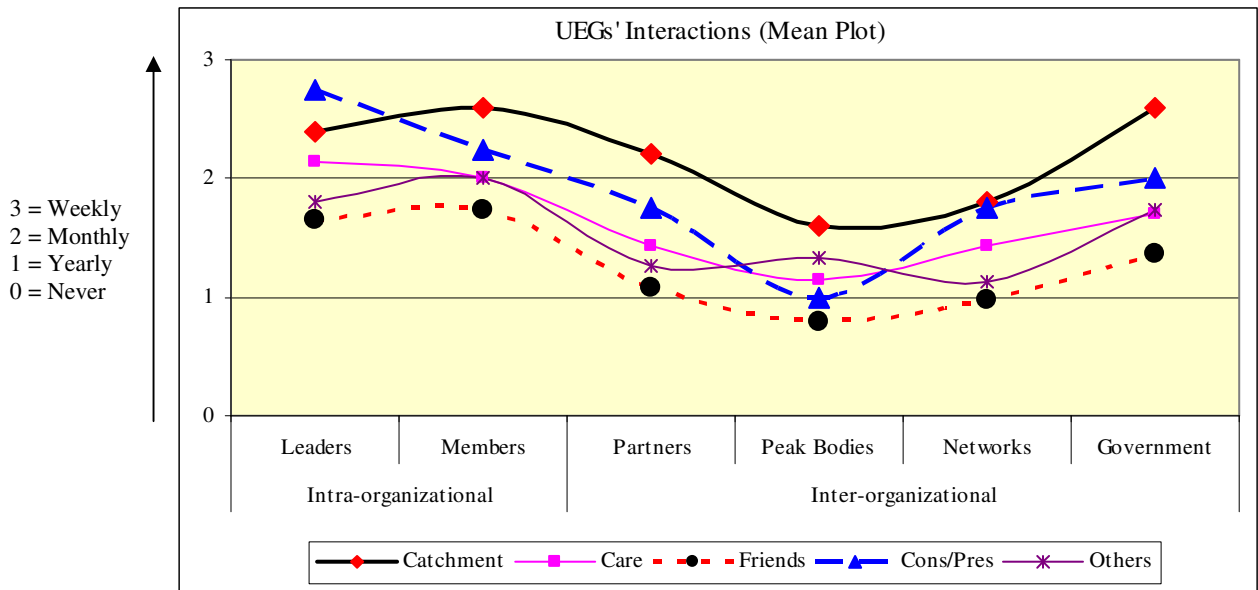
<b>Table 2: Attributes of Urban Environmental Groups (UEGs)</b>									
<i>UEGs (n=81)</i>	<i>Frequency</i>	<i>Inc. Frequency (%)</i>	<i>Have Website (%)</i>	<b>Mean</b>					
				<i>Age</i>	<i>Mem.</i>	<i>Vol.</i>	<i>Staff</i>	<i># of Activities Involved</i>	<i># of Funding Source</i>
Catchment	5	3 (60%)	1 (20%)	16.2	14.0	32.0	0.4	5.0	2.8
Care	7	4 (57.1%)	4 (57.1%)	11.9	31.7	79.6	0.4	4.0	2.7
Friends	50	14 (28%)	7 (14%)	11.3	17.0	16.6	0.0	3.2	2.2
Cons/Pres	4	3 (75%)	3 (75%)	15.5	38.8	41.3	0.3	5.0	3.3
Others	15	9 (60%)	10 (66.6%)	24.2	309.3	86.1	2.1	4.1	2.8
<b>Total</b>	<b>81</b>	<b>33 (40.7%)</b>	<b>25 (30.9%)</b>	<b>14.2</b>	<b>73.3</b>	<b>37.1</b>	<b>0.5</b>	<b>3.6</b>	<b>2.4</b>

**Figure 1**



**Figure 1: UEGs' affiliation with networks and peak bodies**

**Figure 2**



**Figure 2: UEGs' intra and inter organizational interactions**

**Table 3**

<b>Table 3: Spearman Rho correlation test between capabilities and UEG's sustainability</b>						
<i>Capability to:</i>	ENV	PHY	HUM	SOC	FIN	SUS
Accomplish environmental objectives (ENV)	1.00					
Adopt and utilize ICTs (PHY)	.261*	1.00				
Attract/retain members/volunteers (HUM)	.503**	.269*	1.00			
Maintain relationship with stakeholders (SOC)	.564**	.300**	.622**	1.00		
Raise adequate funds (FIN)	.413**	.414**	.559**	.522**	1.00	
Likely to keep functioning (SUS)	.494**	.251*	.472**	.693**	.672**	1.00
** Correlation is significant at the 0.01 level, * Correlation is significant at the 0.05 level						