DEVELOPMENT OF THE CRITERIA AND INDICATORS OF MALAYSIAN GARDEN CITY: A DELPHI CONSENSUS

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Abstract

It is the aspiration of the Malaysian Government to transform the country into a garden nation by 2020. It is envisaged that in the near future the image of garden nation will be materialized when all cities in the country also portray the garden image in their design and visual. There are no criteria and indicators previously used in developing these garden cities. A study was conducted to develop a reliable set of criteria and indicators for an ideal, garden city for Malaysia. Delphi method was used in this study to solicit the opinion from 30 experts through a series of questionnaire. As a result, this study was able to generate and identifying 8 criteria and 42 indicators for an ideal Malaysian' garden city. The criteria and indicators identified could be used by the Malaysian agencies and local authorities in assessing and monitoring the development of garden cities in the country.

Keywords: *Garden City, Criteria, Indicators, Delphi Technique, Expert Opinions*

1 INTRODUCTION

Malaysian Government has been focusing on greening the country by transforming Malaysia into beautiful garden nation by 2020. In the process, every local government need to have their own landscape master plan for their town and cities. Thus, when all cities in the country could portray the garden image in design and landscape planning, the image of garden nation will be materialized. In other words, the image of Garden Nation will be reflected through the formation of garden cities nationwide. This garden city as defined by Town Planning Association, London, is a town designed for healthy living and industry; of a size that makes possible a full measure of social life, surrounded by a rural belt where the whole of the land being in public ownership, or held in trust for the community" (Welwyn Hartfield Council, 2006). The city offered the best of town life and the best of country life to the community (Morris, 1997).

A noble landscape master plan should be made on the premise that Malaysia as a garden nation and the transformation required for the city towards a garden city theme. In many situations however, no term of reference are being made on the criteria of these so called garden cities. In addition, there was no proper study being conducted to develop criteria to define and assess the development of garden city in the country (Lilian et al., 2002). Without having common criteria for the garden city, it is difficult to recognize and declare any city in Malaysia as garden city. Therefore, there are needs to develop common criteria and indicators for a Malaysia garden city which

has local attributes in order to effectively identify, setting-up and monitor the progress of garden cities in Malaysia.

The study aims to develop a set of criteria and indicators for Malaysian garden city using Delphi approach. An important contribution of this study is to further explore and enhance understanding of the role played by the Delphi Technique in urban development, particularly in the development of garden city. The process involved experts that related to garden city. Thus, a comprehensive and holistic point of view could be obtained from this study to find any agreement or disagreement on the criteria of garden city.

Delphi technique was defined as a method for organizing a group consultation process in dealing with a complicated problem (Linstone and Turoff, 1975). The basic idea of Delphi technique is that it is feasible and useful to arrive at an agreement through a communal human intelligence process. The structure of group communication process entails a set of procedures for obtaining and refinement of opinions from expert panels (Dalkey, 1967). The panel must be knowledgeable in a specialized area being discussed. They have to be involved through successive reviews of the given subject until there is consensus of opinion among the expert panel (Hauck et al., 2007)

The advantage of the technique is its ability in eliciting opinions and judgments from expert panels to assist decision making and capitalizing on respondent's creativity, while reducing the problems of group communication (Dunham, 1998). Delphi is able to capitalize experts that are located at substantial geographic distances since it involves non-interactive groups.

The suitability of the Delphi technique to a range of research environments has established the foundation for further development and resurgence in areas such as natural resources management (Barzekar et al., 2011), tourism (Kaynak and Marandu, 2006), medical and health (Howe et al., 2007), nursing (Mamaril et al., 2009), information system (Schmidt, 1997), landscape and urban planning (First, 2010), urban forestry (Maruthaveeran and Amat Ramsa, 2010; Amat Ramsa et al., 2008) and economy (Simoens, 2006). Hence, this technique is therefore one of the most suitable in exploring new ideas such as the criteria and indicators for Malaysian garden city.

2 RESEARCH METHODOLOGY

2.1 Study Design

A seven rounds Delphi technique was used in soliciting the independent opinions from experts in formulating a list of possible criteria and indicators for Malaysian garden city. The final list of criteria developed by this technique at round five was then evaluated by using an instrument used by Jillson (1975) in term of their feasibility, desirability and importance. Criteria with mean score of 1.8 and below were selected as the final criteria for the Malaysian garden city. Indicators were then developed and rated for these criteria by the expert panels at round six and seven.

2.2 Data Analysis

The group opinion is defined as a statistical average of the final opinions of the individual members, with the opinion of every group member reflected in the final group response (Dalkey, 1967). The mean values are reported along with the range and standard deviation in this study. Application of nonparametric statistical technique of Kendall's W test to determine the Kendall's Coefficient of Concordance was conducted in every round of the Delphi process as a means to analyze the degree of consensus among expert panels (Schmidt, 1997). If there is a strong consensus among the participants (value of Kendall's *W* more than 0.07) the process could be stopped.

2.3 Selection of Delphi Experts

A total number of 45 local expert panels were identified, informed and invited to participate in the study. However, only 30 respondents agreed to participate and after the second round, four of the panels dropout due to time constraints. Twenty six respondents participated until the end of the study. The number is appropriate based on past study which proposed that for a homogenous group a smaller sample of 10 to 15 is enough as compared to heterogeneous ones (such as an international study) may require up to

several hundred (Skulmoski et al., 2007). The Delphi technique, engaged local experts from various disciplines related to urban planning and management, and urban forestry. Since the Delphi process involved purposive sampling, the expert panels were also selected based on the knowledge and experience as emphasized by Mamaril et al., (2009) and Skulmoski et al., (2007) even though a high level of expertise is not compulsory since they are familiar with the subject of discussion (Armstrong, 1978). The group consist of three main players; the practitioners, academicians and researchers. Other criteria include policy-makers, female gender to avoid bias, social activist or NGO, ordinary citizens and scientists. During the Delphi process, several measures were taken in improving the validity of the Delphi process. All participants were explained on the background information of the study, the goal of exercise and the explanation on the nature of their contributions (Whitman, 1990). This would be able to address the issues of panellists who may answer inappropriately or become uninterested and biases (Delbecq et al., 1975). Data collections on the expert opinions were gathered following the six steps Delphi process as listed by Isaac and Michael (1981) (adopted and modified for this study to include evaluation by using an instrument used by Jillson (1975)). Questionnaires and feedbacks were sent or received through on-line email and postal service. At the end of every round, new set of questionnaire was developed incorporating the improved statements for the next round of expert opinion. The expert panels were asked to again ranked each statement based on the importance of the statement as a criterion for a Malaysian garden city. The rating values range from 1 for highly unimportant at all to 9 for highly important.

3 RESULTS AND ANALYSIS

3.1 The Expert Panels

The expert panel consisted of male (87%) and female (13%). Majority of the respondents were between ages 40 to 45 (33%) and only one respondent with age 50 and above (Table 1). Respondents had varied qualification with more than 43% completed first degree besides master degree (26.6%) and doctorate (10%). Meanwhile, only 20 percent of the respondents with diploma level but having several years of working experience in their respected field. The largest number of the expert panels (90%) was employed at full time, with the government as the biggest employer (50%) while the local authority formed the smallest (10 %) (Table 1).

Table 1: Demographic Characteristics of the Expert Panels

	Frequency	Percentage
Gender		
Male	26	87
Female	4	13
Age		
Less 35	5	16.68
35-40	7	23.33
40-45	10	33.33
45-50	7	23.33
50 and above	1	3.33
Qualification		
PhD	3	10
Master Degree	8	26.6
First Degree	13	43.3
Diploma	6	20
Employment		
Government servant	15	50
Private company	9	30
Local Authority	3	10
Own Business	3	10

3.2 Round One or Scooping Round: Identification of Criteria

In round one, 30 experts on the Delphi panel were asked to brainstorm and identify the 10 criteria for Malaysian garden city. As a result, there were 215 statements of criteria proposed for the Malaysian garden city that emerged from the expert analysis and selection. The statements for proposed criteria were very broad, some very general and some very specific. Seventy seven or 36% of the statements accompanied with the reasons of their selection.

The open ended questions in round one resulted a large numbers of ideas generated by the panel experts that give the opportunity to the researcher and the experts ample alternatives to refine or choose the best solution in the coming round. As argued by Nowack et al (2011) that development of ideas and better understanding of the thought and ideas of other experts will be enhanced if open-ended questions are used. In addition, unstructured questionnaire which need an open response will provide a bigger scope for the participants freedom to brainstorm on the subject matter under study (Rowe,1994). These are in agreement with the basic function of scooping round which is to explore and identify the issues, in this study the criteria for the garden city.

Table 2 : Result for Round Two

	Statements	Mean	Std. Deviation	Min	Maxi
1	Long term landscape and physical master plan	8.3846	0.6972	7	9
2	High quality open spaces, parks and green areas	8.0769	1.5211	2	9
3	Managed by park and landscape department	8.0385	1.5095	2	9
4	Safe and beautiful living working environment	8.0000	1.9183	2	9
5	Funding to support garden city program	7.8846	1.3365	3	9
6	No political interference	7.8462	1.6172	2	9
7	Public participation	7.8077	1.6497	2	9
8	Educational and visitors friendly	7.6923	1.5942	1	9
9	Network of green infrastructure	7.6154	1.6752	1	9
10	Garden design should be blend with city plan and needs	7.5000	1.8385	1	9
11	Ecologically and culturally feasible	7.4615	1.7258	1	9
12	Proper drainage system	7.4231	1.9219	1	9
13	More than 50% of open space planted with trees no plastic trees	7.3846	1.9814	2	9
14	Benchmark with other city	7.2308	2.1035	1	9
15	Priority for natural local resources	7.2308	1.9038	1	9
16	Friendly and provide good hospitality	7.1154	1.9458	3	9
17	Free from utility line, underground cabling	7.0000	1.8330	2	9
18	Increase social and economic benefits	6.8846	1.7737	3	9
19	Good public transport and services	6.7692	2.2505	1	9
20	Permanent green area, 40% to 50% from total area	6.7692	2.2857	1	9
21	Unique image and identity	6.7692	1.9861	2	9
22	Availability of garden centres for public to get supply of garden material	6.7308	1.7563	3	9
23	Ecotourism program for tourist	6.7308	1.6139	4	9
24	City with million trees	6.6923	1.5689	4	9
25	Accessible at any time	6.6154	1.8989	2	9
26	Traditional design for garden furniture	6.5769	1.8149	2	9
27	Lighting and water features in strategic location	6.5769	1.6291	3	9
28	Provide good place for tourist to visit	6.5000	1.2728	4	9
29	City of mega diversity	6.4231	1.9219	2	9
30	Landscape design focus on low cost maintenance	6.1923	1.3272	3	8

Importance Scale: 1 Highly unimportant to 9 Highly important

The result of round one was analysed and edited. Statements with equal meaning, having a similar scope and perspective or can be considered as redundant were grouped together and 58 new statements that represents the group was constructed. The list of statements was sent to the panel to review and deleted where necessary to reduce the number of statements into a manageable one with a clear message, easy to understand and can be measured. Consequently, the statements were reduced further to a total of 30. New questionnaire was later sent to panel expert for their comments and ratings.

3.3 Result of Round Two

The result for round two was analysed resulting with modifications and improvements as suggested by the expert panel (the rating value for their importance ranging from 8.38 as the highest and 6.19 as the lowest (Table 2). Some of the expert panel proposed for further refinement or modification of the statements, to reflect better meaning, scope or message. There were nineteen statements involved in this exercise as shown in Table 2.

The top three statements were long term landscape and physical master plan; high quality plants, open spaces, parks and green areas; and manage by park and landscape department with their value of 8.38, 8.07 and 8.03 respectively. Statistical test showed that Kendall's W value of 0.193 (χ^2 = 145.72, df 29, $p \leq 0.001$) indicating lack of agreement between expert panels in rating the criteria. Since this was the first round where rating was involved thus it was expected that there were low consensus among the expert panel.

3.4 Result for Round 3

In this round, it seems that there was no refinement of statements in term of language or wording. However, one of the expert panels had proposed to merge two statements: High quality plants, open spaces, parks and green areas throughout the city and network of green infrastructure. The reason that both are related and all open spaces, parks and green areas should be connected to each other so natural processes could function effectively. The suggestion was relayed to all the expert panels and they unanimously agreed.

The result for round three shows an improvement in term of rating values as well as modifications to the statements. The rating value for their importance improved for most of the statements ranging from mean of 8.81 as the highest and 6.15 as the lowest (Table 3). The top five statements still maintained although some have changed positions. Safe, healthy beautiful living working environment has climbed to the first place from number four. The consensus among the expert panels in rating the criteria is also improving with an increase of the Kendall's coefficient of concordance from 0.193 in round one to 0.484, but is not enough to stop the iterative process which need the degree of consensus among expert panels more than 0.7 (Schmidt, 1997). Hence, the process continued to round four.

Table 3: Result for Round Three

	Criteria	Mean	Std. Deviation	Min	Max
1	Safe and healthy living environment	8.81	0.4019	8	9
2	High quality plants, open spaces, parks and green areas throughout the city	8.50	0.5099	8	9
3	Enough funding to support garden city program	8.42	0.5038	8	9
4	Functional integrated landscape and physical master plan	8.35	0.4852	8	9
5	Establishment of park and landscape department	8.23	0.5144	7	9
6	Network of green infrastructure	8.19	0.6336	7	9
7	Ecologically and culturally sustainable	8.15	0.7844	7	9
8	Public participation in decision making process	8.08	0.6883	7	9
9	Used of indigenous species in greening and beautification activities	8.08	0.6883	7	9
10	Distinct image and identity	7.31	0.6793	6	8
11	City design blend with people needs	7.31	0.9703	5	9
12	Educational and user friendly	7.27	1.3132	5	9
13	Efficient public transport and services	7.23	0.8152	5	8
14	City dweller very friendly and provide good hospitality	7.12	1.5576	4	9
15	City of multi species with million trees	6.85	1.1204	5	9
16	Availability of garden centres for public to get supply of garden materials and information	6.81	1.2967	4	8
17	Provide good place for tourist to visit	6.73	1.3132	3	8
18	Ecotourism program for tourist	6.69	1.4358	3	8
19	Generate local economic activities	6.65	0.8458	5	8
20	Lighting and water features in strategic location	6.65	1.1642	5	8
21	Permanent green area, 25% from total area	6.58	1.2384	4	8
22	Free from utility line, underground cabling	6.58	1.2057	3	8
23	Traditional design for garden furniture	6.58	0.9021	4	8
24	More than 50% of open space planted with trees	6.54	1.1740	4	8
25	No political interference in the management of garden city	6.54	0.8593	5	8
26	Landscape design focus on low cost maintenance	6.46	1.2076	4	8
27	Standard have benchmark with other city around the world	6.31	1.2575	3	8
28	Accessible at any time	6.31	1.2890	4	8
29	Good drainage system	6.15	0.9671	4	7

Importance Scale: 1 Highly unimportant to 9 Highly important

3.5 Result for Round Four

The result for round four revealed a further improvement in the rating for their importance with the highest mean of 8.88 as compared to previous round which was 8.81 (Table 4). There was no change for the top eight statements, with the first seven remained at their position respectively.

Table 4: Result for Round Four

	Criteria Statements	Mean	Std. Deviation	Min	Max
1	Safe healthy beautiful living working environment	8.88	0.3258	8	9
2	Network of high quality plants, open spaces, parks and green areas throughout the city**	8.65	0.4851	8	9
3	Enough funding to support garden city program	8.54	0.5083	8	9
4	Functional integrated landscape and physical master plan	8.42	0.5038	8	9
5	Establishment of park and landscape department	8.35	0.4851	8	9
6	Ecologically, economically and culturally sustainable	8.27	0.5334	7	9
7	Use of indigenous species in greening and beautification activities	8.19	0.4019	8	9
8	Public participation in decision making process	8.12	0.6528	7	9
9	Efficient public transport and services	7.53	0.6468	6	8
10	Generate local economic activities	7.42	0.5777	6	8
11	Educational and user friendly	7.31	0.6176	6	9
12	Distinct image and identity	7.27	0.4523	7	8
13	City dweller very friendly and provide good hospitality	7.15	0.5434	6	8
14	City of multi species with million trees	7.04	0.5602	6	9
15	Permanent green area, not less than 25 % from total area	6.92	0.5159	6	8
16	Availability of garden centres for public to get supply of garden materials and information	6.88	0.6126	5	8
17	Provide good place for tourist to visit	6.85	0.4019	6	7
18	Ecotourism program for tourist	6.81	0.7103	6	8
19	City design blend with people needs	6.77	0.5334	6	8
20	Lighting and water features in strategic location	6.73	0.6894	5	7
21	Landscape design focus on low cost maintenance	6.65	0.5083	6	7
22	Free from utility lines through underground cabling	6.46	0.6433	5	8
23	Standard have benchmark with other city around the world	6.42	0.6373	5	8
24	Accessible any time	6.38	0.5615	5	7
25	Traditional design for garden furniture	6.35	0.4019	6	7
26	No political interference in the management of garden city	6.19	0.3679	6	7
27	More than 50% of open space planted with trees	6.15	0.2717	6	7
28	Good drainage system	6.08	0.8593	5	8

**Merger of two statements: High quality plants, open spaces, parks and green areas throughout the city and network of green infrastructure.

Importance Scale: 1 Highly unimportant to 9 Highly important

Table 4 also showed an improving consensus among the expert panels in rating the criteria. Majority of the statements having standard deviation values below 0.7. The Kendall's coefficient of concordance (Kendall's W) has improved highly from 0.484 in the previous round to 0.741 (χ^2 = 520.515 df 27 $p \leq 0.001$). With this Kendall's W value more than 0.7, it can be said that there is strong consensus among the expert panels about the subject and indicated that iterative process could be end here. This is in agreement with Worthen and Sanders (1987) statement that consensus usually begins to show off quickly after the third round. It may also contributed from the statistical summary of the rating exercise which were given to the panel in every round. This nonparametric statistical technique provides a guide for them in determining their priorities (Bowles (1999), Isaac and Michael (1981) and Schmidt (1997)) in reaching the consensus. In addition, the nonparametric test helps the researcher in deciding whether further round of exercise is needed or not.

3.6 Results of Round Five

Round five was an important step in identifying the most relevant and operational statements to be used as the criteria for the Malaysian garden city. Round five consisted of evaluation of the selected 28 statements based on their feasibility (practicality scale), desirability (benefits scale) and importance. It is an important step in the study as compared to other past studies to reflect real-life practice as mentioned by Simoens (2006). Eight statements obtained score of less than 1.8 which mean they were highly feasible, highly desirable and very important. These eight statements were the final criteria of Malaysian garden city. Preceding this, the expert panels were asked to identify the indicators for each criterion and the outcome were 42 indicators.

The second group of criteria, that involved another six statements, obtained average mean equal to or greater than 1.80 but less than 2.6 based on the scale used by Jillson (1975). These groups of criteria fall under the category of feasible, desirable and important. However, for the purpose of this study, they were not selected as the final criteria for Malaysian garden city. Since the study involved seven round of Delphi technique, and the last two rounds was asking the expert panel to list down possible indicators for each criterion, thus, too many criteria may reduce the interest of the respondents. Thus, it was decided only criteria that are most feasible and operationally easy to implement were selected to define the Malaysian garden city.

3.6 Results of Round Six

Upon receiving the feedback from the expert panels, the result of round six was analysed and edited. Statements with equal meaning or having similar scope or perspective or can be considered as redundant were grouped together and a new statement that represents the group was constructed. The main objective of this exercise was to reduce the number of statements into a manageable one with a clear straight forward message, easy to understand and can be measured. A total of 58 statements of indicators were emerged after the exercise.

3.7 Results of Round Seven

The result for round seven found all indicators received scores of above 8.0 for majority of them. Forty two indicators with mean of 8 and above were selected to be the final indicators for Malaysian garden city as shown in Table 6.

The selected set of 8 criteria and 42 indicators for Malaysian garden city were priority measures of garden city description, comprising most of the components suggested by Ebenezer Howard in his ideal garden city design. In his design he promised a clean, pollution free city with a lot of open spaces and parks which gives the best of the rural (Clark, 2003). It also fit well with the criteria that described by Ebenezer Howard in his three magnets but has been rephrased by Hall and Ward (1998) for urban scenario in 1990. The urban scenario mentioned by them consists of express metropolitan/ light rail, no need for cars, mixed land uses, short trip on foot, nearby field, no pollution, new communities, affordable homes, balanced economy, jobs for all, local jobs and services, wider opportunities, small town values, global access, sustainability and stakeholdership.

Table 5: Summary of Evaluation Scale for Feasibility, Desirability and Importance

	Criteria	Feasibility	Desirability	Importance	Average Mean
Less than 1.80, highly feasible, highly desirable, very important					
1	Safe healthy beautiful living working environment	1.38	1.04	1.08	1.17
2	Functional integrated landscape and physical master plan	1.31	1.31	1.27	1.30
3	Network of high quality plants, open spaces, parks and green areas throughout the city	1.35	1.27	1.31	1.31
4	Use of indigenous species and local resources in greening and beautification activities	1.23	1.46	1.27	1.32
5	Enough funding to support garden city program	1.46	1.58	1.19	1.41
6	Public participation in decision making process	1.15	1.73	1.5	1.46
7	Establishment of park and landscape department	1.31	1.54	1.73	1.53
8	Ecologically, economically and culturally sustainable	2.50	1.50	1.27	1.76
Equal to or greater than 1.80 but less than 2.6, feasible, desirable, important					
1	Generate local economic activities	2.12	1.69	1.73	1.85
2	Efficient public transport and services	3.04	1.50	1.50	2.01
3	Educational and user friendly	1.96	2.08	2.12	2.05
4	Provide good place for tourist to visit	2.12	2.00	2.15	2.09
5	Distinct image and identity	2.54	2.00	2.04	2.13
6	City dwellers very friendly and provide good hospitality	1.92	2.00	2.00	2.32
7	Standard have benchmark with other city around the world	3.12	2.23	2.27	2.54
8	Permanent green areas, not less than 25% from total area	3.35	2.35	2.04	2.58
Equal to or greater than 2.6 but less than 3.40, may or may not feasible, neither desirable nor undesirable, moderately important					
1	City of multi species with million trees	2.31	2.38	3.23	2.64
2	Landscape design focused on low cost maintenance	2.88	2.15	3.35	2.79
3	Accessible at any time	3.04	2.54	3.58	2.85
4	Free from utility line through underground cabling	3.85	2.27	2.77	2.96
5	Lighting and water features in strategic location	3.69	2.00	3.35	3.01
6	Traditional design garden furniture	2.73	2.62	3.73	3.03
7	Ecotourism program for tourist	2.96	2.65	3.81	3.14
8	Availability of Garden centres for public to get supply of garden material and information	3.31	2.31	3.88	3.17
9	Proper drainage system	3.69	2.08	3.85	3.21
10	City design should be blend with people needs	3.77	2.23	3.92	3.31
Equal to or greater than 3.4 but less than 4.20, probably infeasible, undesirable, unimportant					
1	No political interference in the management of garden city	4.00	2.62	3.65	3.42
2	50% from total area planted with trees	4.46	2.54	4.00	3.67

Table 6: The Final Criteria and Indicators for Malaysian Garden City

Criteria	Indicators	Mean
Safe Healthy Beautiful Living Working Environment	Low crime rate	8.5
	Affordable housing	8.5
	Clean city, pollution free and good waste management	8.4
	Beautiful garden environment is experienced all over the city	8.1
	Sufficient areas and facilities for recreational activities	8.1
	Healthy race relations	8.0
	Sufficient no of health and educational facilities	8.0
	Efficient public transport and services	8.0
Functional Integrated Landscape and Physical Master Plan	Availability of gazetted long term physical and landscape master plan	8.5
	Development is strictly in accordance to plan	8.5
	The criteria and indicators for Malaysian garden city are stated and incorporated in the plans	8.4
	Landscape and layout plan for development submitted and approved together	8.2
	The plan has gone public scrutiny before being gazetted	8.1
Network of High Quality Plants, Open Spaces, Parks and Green Areas Throughout the City.	Record and maps on location, area and type of open spaces, parks and green areas	8.8
	Existence of interconnected network of green space throughout the city	8.5
	Existence of functional and updated tree inventory database	8.4
	Total public space per 1000 population	8.3
	Levels of use of facilities, open spaces, parks, green areas, walkways and sports fields	8.2
	Satisfaction index for public open spaces, parks and green areas	8.1
	Percentage of open spaces, parks and green areas from total city area	8.1
Use of Indigenous Species and Local Resources in Greening and Beautification Activities.	Percentage of indigenous species in landscaping and greening	8.4
	Percentage of local materials in landscape furniture	8.3
	Flora species richness, evenness, and composition	8.2
Enough Funding to Support Garden City Program	Percentage of city annual budget allocation for greening and beautification purposes	8.3
	Percentage of funding and support from federal and state governments	8.0
	Balance percentage of annual budget allocation for establishment as well as maintenance	8.0
	Percentage of funding and support from private sector initiative	8.0
Public Participation in Decision Making Process	Existence of platforms or institutional arrangement for public to participate in decision making	8.7
	Existence of law, statute, rules and regulations for planning and development proposal to be scrutinized by public	8.5
	Evident of environmental partnership through friends or groups for parks and green spaces	8.5
	Percentage of population involved in community program	8.3
Establishment of Park and Landscape Department	Existence of a park and landscape department	8.9
	Employment of multidiscipline and highly qualified professionals including certified arborists	8.7
	Sufficient number of staff and fund allocate to the department	8.6
	Professional and efficient governance based on ISO 9000 or any recognized quality management system	8.3
	Existence of a long term human resource development program	8.0
Ecologically, Economically and Culturally Sustainable	Job and business growth rate	8.4
	Records on conservation of natural ecosystems, biodiversity and ecologically sensitive areas	8.3
	Records on conservation of heritage sites and objects	8.2
	Conservation of traditional arts and cultures	8.2
	Percentage of budget allocated for heritage and ecological conservation initiatives	8.1
	Urban poverty levels	8.1

The two statements of efficient public transport and services, and generate local economic activities were part of the original idea of garden city mooted by Howard, however, they were not selected as the final criteria. Interestingly, the statement efficient public transport and services was selected as an indicator for the criterion of safe healthy beautiful living working environment as access to attractions by public transport and on foot is of great importance to foreigners at urban destinations (Thompson and Schofield, 2002).

4 CONCLUSION

The study has successfully benefitted from the effectiveness of the Delphi technique in allowing a set of people, as a group, to address a difficult, complicated problem (Linstone and Turoff, 1975) or lack of information about a phenomenon (Adler and Ziglio, 1996) and arrived at an agreement by means of a collective human intelligence process (Linstone and Turoff, 1975). The Delphi technique provided a valuable framework for tapping expert knowledge on the suitable criteria for Malaysian garden city. The technique yielded both insight and structure in the formulation of criteria that define garden city and as a mean to assess development of any garden city in the making or the performance of the existing one. This proved to be useful in area where incomplete or limited knowledge on the criteria and indicators were previously not available.

The final outcome of this study was the identification of 8 criteria and 42 indicators of Malaysian garden city to address the need for an instrument in identifying or recognizing a Malaysian garden city and also as a mean in measuring the progress of the said garden city. The set of criteria selected were diverse, encompassing most of the characteristics of a city as a place to live and work. However, as summarized by Hung et al., (2008) from past studies, the technique also has some limitations particularly time requirement and commitment. This was evident in the study where four respondents were reluctant to continue after round two due to time limitation and other commitments. The time taken by the expert panels to give feedback was also quite long which finally dragged the whole process to almost six months to complete.

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