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Indicators of Community participation in master plan

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Abstract:

The community participation process is a key party in the plan development and success process, so the local community should have a say in building the master plans for their cities and they have the authority to make decisions. In this research, we will get acquainted with the city of Diwaniyah, the study area, and to determine its boundaries and the master plan for it., and analyzed its results using statistical methods that relate to planning indicators extracted from the conceptual framework and previous studies. A specialist distributed to the Urban Planning Directorate (11), the Diwaniyah Municipality Directorate (23) and the Governorate Bureau (17). The results of the research and through the statistical analysis of the answers in the questionnaire using the statistical program (SPSS) statistical package for social since and statistical comparisons that showed the existence of high importance and reliability of the axis of community participation in the planning process, The research also concluded that community participation is an influencing process in the master plan of the city, and the study recommended a set of recommendations, including: giving powers to the decision-makers responsible for the master plan, in order to enable them to participate effectively in the master plan, with the need to provide these local institutions with planning cadres with specialists in urban planning and community participation.

Keywords: Al-Diwaniyah city center, community participation, master plan.

1-1 Defining and defining the study area

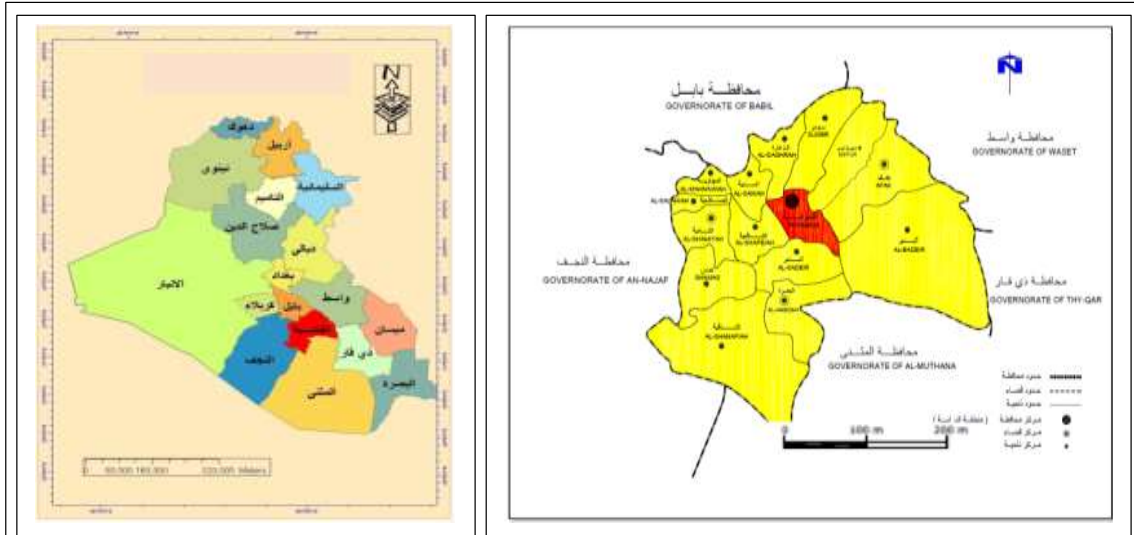
The location of the city of Diwaniyah is determined between the latitude ($^{\circ}31, 39'$) north, and the longitude ($15''$, $^{\circ}44$, $55'$) east, and this is what gained it a central location in the Middle Euphrates region, as in Map (1) with respect to For Iraq, here it must be noted that the link of the city and its importance is the importance of the site. The geographical location of the city of Diwaniyah is



almost ideal, as it represents the most important city in the governorate, and the administrative center is in four districts (Diwaniyah, Hamza, Afak, and Shamiya), which helped to grow the city's centralization within its region.

Diwaniya is located in the central part of southern Iraq, Map (2) on the Euphrates River, about 180 km south of Baghdad, and about 320 km to the north of Basra, and on the eastern branch of the Euphrates River in Iraq, where the sedimentary plain begins north of Baghdad Until it extends to the Arabian Gulf, the city of Diwaniya is located within the sedimentary plain and the delta, and it consists of agricultural lands and gardens with which to mix, with its beginning from the north, and it continues to the east, especially in the Sumer region, as well as the center of the Afak district, and the surface rises range from (13–23) meters from the sea.

But after 1958 AD, the river's job in transportation has diminished, but the process of transporting goods by train has continued, and during the year 1958, many roads linking Diwaniya with the cities of Najaf, Samawah and Hilla were paved, and with other cities (Hammadi, 1999, p. 204) The city was also linked to a number of roads linking it with the neighboring cities, and these roads were the arteries that contributed to the growth and development of the city, as well as making it an urban center within its region.



Map (1) of the geographical location of Al-Diwaniyah Governorate for Iraq

Source: The researcher relying on the General Survey Authority, 2011

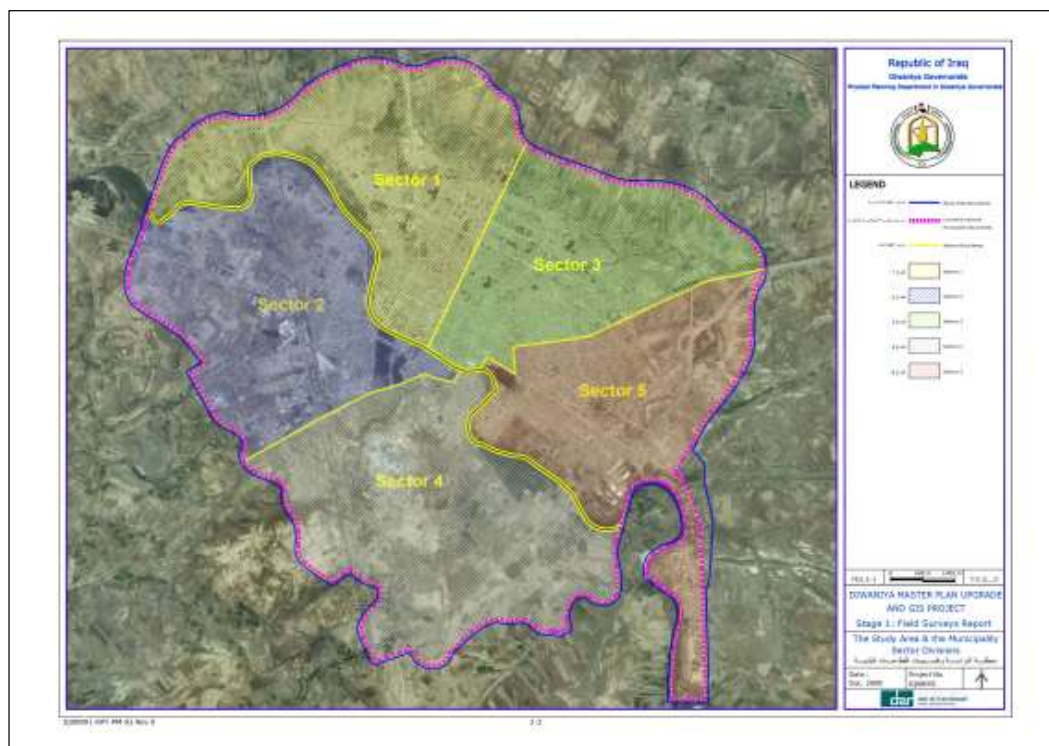
Map (2) of the city of Diwaniyah city within the borders of the Qadisiyah administrative district

Source: Al-Diwaniyah Governorate, Department of Geographical Information Systems, 2011

2-1 limits of study area

Al-Diwaniyah city is located in the center of the governorate and is bounded to the north by the direction of Daghara, to the east by the Afak district, to the south by the Sudair side and to the west by the Shafi'i side, and the study area is usually determined before the start of data collection by listing the area and dividing it into several districts, and this is according to the size of the urban area. And the type of information that is required to collect it, and in our study on the urban area of the city of Diwaniyah and its relationship to land uses, the external borders were defined in order to include all the areas that fall within the borders of the Diwaniyah municipality, and the external border line passes through the six entrances of the city to other provinces, and the internal range is divided into 5 sectors. As in map (3) sequenced according to the urban growth of the city, and the boundaries of the sectors pass through the main streets in the city, as some of its borders go along the river, and the sectors are divided into secondary areas

where each region includes one or more residential areas, and its borders are the other. It passes through understandable and clear points, and the size of each region differs from the other according to the population density, traffic density and the importance of the site. (Al-Dulaimi, 1985, pp. 33–35)



Map (3) the boundaries of the study area and the sectors of Al-Diwaniyah city

Source: The researcher relying on updating the master plan of Diwaniyah city and building the 2008 database

3–1 Primary characteristics of the study sample

The questionnaire was distributed to all members of the study community who have jurisdiction to collect the necessary information, and the response rate was (100%), and data and information related to work and workers in local administrations were sorted from decision-makers and specialists in the planning process, and general descriptive information related to the characteristics of

Respondents represented by (academic achievement, specialization, profession, years of service) and the following is a presentation of their details:

1– Academic achievement

Table (1) numbers and percentages for academic achievement

Certificate	Prep	Technical Diploma	Bachelor	Master's Degree	Total
the number	3	16	29	3	51
The ratio %	5.9	31.3	56.9	5.9	100

Source: The researcher using the questionnaire

2– Specialization:

Table (2) numbers and percentages for specialization

Specialization	Planning	geometric	political science	Administrative Sciences	Social sciences	Pure science	Total
the number	1	28	2	12	6	2	51
The ratio %	2	54.9	3.9	23.6	11.7	3.9	100

Source: The researcher using the questionnaire

3– Profession:

Table (3) numbers and percentages of the profession

Occupation	Surveyor	Officer	Systems Analyst	Total
the number	2	48	1	51
The ratio %	3.9	94.1	2	100

Source: The researcher using the questionnaire

4– Years of service:

Table (4) numbers and percentages of years of service

Years of service	1–5	6–10	11–15	16–20	More than 20	Total
the number	21	13	7	5	5	51
The ratio %	41.2	25.5	13.7	9.8	9.8	100

Source: The researcher using the questionnaire

It is clear from the above that there is a gap related to the demographic characteristics of respondents, especially with regard to the indicators of academic achievement and specialization, where we find that there is an increase in the number of respondents from the first academic achievement represented in (technical diploma and bachelor) on the one hand, and a relative decrease in the numbers of planning disciplines compared to the total respondents to the study sample. On the other hand, which indicates the necessity of reviewing the relevant and specialized staff in the local administrations, by providing them with specialized cadres from urban and regional planning specialists and those with high academic achievement.

The second topic: descriptive analysis of the answers of the study sample

1-2 Analyzing the answers of the indicators of community participation and master plan

Table (5) and (6) present the statistical summary of the respondents' results related to the axis of community participation and master plan. The axis paragraphs came with six indicators. These indicators were represented by (mean measurement and standard deviation) and by adopting the classified responses (weak, medium, good, very good, Excellent), and the questionnaire data was sorted and categorized and the results were extracted by using the statistical program (Spss).

Table (5) Analysis of respondents' answers to indicators of community participation and master plan

The indicator	Weak	medium	good	very good	Excellent	The average	standard deviation
1	25	15	10	–	1	1.76	0.907
2	20	17	11	3	–	1.94	0.925
3	20	24	7	–	–	1.75	0.688
4	20	23	7	1	–	1.78	0.757
5	30	13	5	3	–	1.63	0.894
6	24	18	8	1	–	1.73	0.802

Table (6) Mathematical Circles and Standard Deviation for Community Participation Indicators and master plan

s	The indicator	The average	standard deviation
1	The level of community participation in the stages of preparing the master plan for the city	1.76	0.907
2	A plan to prepare and update the master plan of the city, with the participation of the local community	1.94	0.925
3	The extent of compatibility of the spatial distribution of land uses in the city with the master plan	1.75	0.688
4	The flow of the existing road network in the design of the current foundation of the city	1.78	0.757
5	The level of work of the competent authorities in proposing and evaluating the master plan between civil society and the local council	1.63	0.894
6	The level of coordination between the strategic planning committees with civil society organizations in the field of master plan and project proposal	1.73	0.802

Source: The researcher relying on the results of the statistical analysis spss

It is clear from analyzing the answers of the study sample items in the light of the paragraphs of the community participation axis and the master plan that the indicators paragraphs (1, 2, 5 and 6) have achieved the most answers, the degree of evaluation at a weak level and with ratios of (49%, 39%, 59%, and 47%) respectively, and this Consistent with the research problem that states (weak planning vision for community participation in preparing and building master plans for cities at the local level), and therefore the research emphasizes the need to achieve a clear planning vision for community participation and increase its level at all stages of the master plan in accordance with the goals and mechanisms of sustainable development, and ensure Achieving a high level of cooperation and coordination between the planning committees and those involved in the planning process in the local administrations and giving them the powers to enable them to take decisions. As for the two indicators (3 and 4), they

achieved a score of evaluation at an average level with two percentages (47%, 45%) respectively.

2-2Analyzing the answers of the indicators of societal participation in the planning process

Table (7) and Table (8) present the statistical summary of the results of respondents related to the axis of community participation in the planning process, and the axis paragraphs came with five indicators: (community participation at the local level, the spatial dimension in the process of community participation, community participation and sustainability, empowerment strategy and community participation Interconnected local development), represented by (mean measurement and standard deviation), and by adopting the classified responses (strongly agree, agree, neutral, do not agree, strongly disagree), and the questionnaire data was sorted and categorized and the results extracted by using the statistical (Spss) program .

Table (7) Analysis of respondents' answers to indicators of societal participation and the planning process

Paragraphs	Strongly disagree	I do not agree	neutral	Agreed	Strongly agree	The average	standard deviation
Community participation at the local level						4.05	0.887
1	2	1	3	28	17	4.04	0.916
2	-	4	5	26	16	4.05	0.858
Spatial dimension in the process of community participation						4.38	0.700
3	1	1	4	27	18	4.18	0.817
4	-	-	2	18	31	4.57	0.575
Community participation and sustainability						4.30	0.725
5	-	-	4	26	21	4.33	0.622
6	-	3	3	22	23	4.27	0.827
Empowerment and community participation strategy						4.21	0.706
7	-	1	1	22	27	4.47	0.644
8	-	-	3	24	24	4.41	0.606
9	-	4	15	22	10	3.75	0.868
Interconnected local development						4.21	0.935
10	1	2	7	22	19	4.10	0.922
11	1	3	2	18	27	4.31	0.948

Table (8) mean and standard deviation of the indicators of community participation

Source: The researcher relying on the results of the statistical analysis spss

s	Indicators	The average	standard deviation
1	Community participation at the local level	4.05	0.887
2	Spatial dimension in the process of community participation	4.38	0.700
3	Community participation and sustainability	4.30	0.725
4	Empowerment and community participation strategy	4.21	0.706
5	Interconnected local development	4.21	0.935

Source: The researcher relying on the results of the statistical analysis spss

It appears through analyzing the answers of the vocabulary of the study sample in the light of the paragraphs of the societal participation axis in the planning process that all the responses and all the paragraphs have achieved a high level and on the two levels of scale (strongly agreed, agreed), and with high percentages, and thus, and in light of the foregoing, the degree of vision is clear by the general Respondents with competence in the local administrations (Urban Planning Directorate, Municipality Directorate, and Governorate Council) in Diwaniya, regarding the agreement and the importance of the importance of the indicators included in the questionnaire, particularly in the paragraphs of the community participation axis in the planning process.

The third topic: the statistical analysis of the study variables

1–3Multiple Comparisons

It is a method for performing a number of preliminary tests to determine the moral differences between the averages, and to make a comparison between each medium in order to find out which of the media differs from the mean or other media. Therefore, several comparisons between the mean of the axes are

required depending on the number of paragraphs of each indicator, and this is called multiple comparisons. Comparison (Al-Samarrai, p. 37, 2009), which is one of the methods that are used to indicate the statistical differences between the indicators, and one of the common methods in this regard is the Least Significant Difference method, symbolized by LSD, and its name came from the value of t that is used to test the differences between the averages. The lowest value that must be exceeded by the difference between the two averages in order to be significant. For the purpose of testing the significance of the difference between the two mean axes of our studies using this method, it requires calculating the smallest moral difference at the 5% level of significance according to the following formula:

$$LSD_{0.05} = t_{0.05} * Sd$$

$$LSD_{0.01} = t_{0.01} * Sd$$

Since t represents the tabular value of the test t , the degree of error freedom in the variance analysis table.

Sd is the standard error that is used to test the difference between the two axis averages and their formula

$$Sd = \sqrt{\frac{2S_e^2}{r}}$$

Average squared error in S_e^2 contrast analysis table

r number of vertebrae per axis

The formula for the standard error, if the paragraphs for each axis are different, is:

$$Sd = \sqrt{S_e^2 \left(\frac{1}{r_1} + \frac{1}{r_2} \right)}$$

r_1 , r_2 is the number of two-axis paragraphs to compare

The difference between each of the two axes is calculated and the difference is compared with the value of LSd . Every difference greater or equal to the value of LSd is considered a significant difference. When the difference is smaller than LSd , it is an insignificant difference.

When applying this method and using the SPSS-23 statistical program, we obtained the following results:

First: Analysis of differences for indicators of community participation and master plan

– Analysis of the variance between indicators

When analyzing the differences between the indicators of community participation and master plan (Table 6, p. 6) using the analysis of variance, we obtained the following results:

Table (9) Analysis of variance between indicators of community participation and master plan ANOVA

Significance level P	F	Average squares	Degrees of freedom	Sum of squares	Source of contrast
0.574	0.768	0.533 0.695	5 300	2.667 208.392	The error between pointers
			305	211.059	Overall

Source: The researcher relying on the results of the statistical analysis spss

It is clear from Table (9) that there are no significant significant differences between indicators, as the value calculated to F is smaller than its tabular counterpart at the level of 0.05 of 2.21, that is, the differences between the averages of the indicators cannot be considered significant and significant

differences. It is not necessary to calculate the multiple comparisons between indicators.

Second: Analysis of the differences for the indicators of community participation and the planning process

– Analysis of the variance between indicators

When analyzing the differences between the indicators of community participation and the planning process (Table 7 p. 9) using

Analysis of variance, we obtained the following results:

Table (10) Analysis of variance between the indicators of societal participation and the ANOVA planning process

Significance level P	F	Average squares	Degrees of freedom	Sum of squares	Source of contrast
0.113	1.886	0.759 0.402	4 250	3.036 100.612	The error between pointers
			254	103.649	Overall

Source: The researcher relying on the results of the statistical analysis spss

It is clear from Table (10) that there are no significant differences between indicators, as the calculated value of $F (1.886)$ is smaller than its table counterpart of 2.21 at the level of 0.05, that is, the differences between the averages of the indicators are not significant.

2–3Analyze the effect of community participation in master plan using the Simple Linear Regression method

By analyzing the answers of the study sample for the questionnaire using the SPSS-23 program, we obtained the following results:

Table (11) correlation coefficient and determination coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709 ^a	.503	.501	.29350

Source: The researcher relying on the results of the statistical analysis spss

Table (11) correlation coefficient and determination coefficient

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.423	1	.423	4.905	.031 ^b
	Residual	4.221	49	.086		
	Total	4.643	50			

Source: The researcher relying on the results of the statistical analysis spss

(13) Regression coefficients and their statistical significance

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	1.684	.440		3.828	.000
	x	.244	.110	.302	2.215	.031

Source: The researcher relying on the results of the statistical analysis spss

Accordingly, the estimated regression equation is based on the results of the analysis:

$$\hat{y} = 1.684 + 0.2444X$$

As that

X represents community participation

Y is the basic planning and design

Through the previous tables for regression analysis, and by drawing on the following decision-making basis:

There was no effect of community participation in H0: M = 0 baseline design

There is an effect of community participation in the master plan H1: M ≠ 0

It turned out the following:

1– The value of the determination coefficient appeared 0.503, which means that the social participation explains 50.3% of the changes that occur in the basic planning and design, which is of medium value.

2– The increase of one community participation unit in planning, then the master plan increases by 0.244 interaction units in planning.

3– Community participation (independent variable X) has the effect and strength of an influencing relationship in the master plan (dependent variable Y), and this is consistent with the objective of the research that emphasizes clarifying the impact of community participation in the basic plans.

4– There is reliability of societal participation, as the calculated value of t was 2.215, which is greater than its tabular counterpart of 1.645 at 0.05.

5 – Since community participation has an impact in the stages of preparing the master plan, it is possible to benefit from previous studies that focused on the importance of relying on scientific approaches in analyzing community participation and the level of their impact on master plan, and benefit from experiences that examined the level of the impact of community participation, as well as what was previously mentioned in The theoretical framework of the necessity of emphasizing the empowerment strategy and the characteristics of the integrated city in order to reach to achieve a high and effective level of community participation in the master plan, and this is consistent with the research goal that emphasizes the need to achieve a planning vision for community participation in accordance with the goals and mechanisms of sustainable development, and with the premise The research that says that community participation in the master plan building stages contributes to preserving resources and capabilities and achieving spatial balance in accordance with the empowerment strategy and planning standards.

3–3Hypotheses testing

For the purpose of testing the research hypothesis, appropriate parameter tests were used, as the distribution of data is by following the normal distribution, which is:

1 – Correlation coefficient ($1 \geq R \geq -1$): It is the coefficient that measures the strength of the relationship between the variables and at a significant level at (0.05). After conducting the necessary statistical analysis to test the validity of the hypotheses by tables extracted from the statistical analysis, it became clear that

the correlation coefficient R is (70%), which is highly significant and represents a positive correlation between the studied variables.

2- Statistical (F): This statistic measures the morale of the model if it is acceptable or not acceptable depending on the significance in the ANOVA tables. If it is $0.05 \geq (P)$ this means that the regression model is with a high degree of relevance.

By relying on the decision-making base (H_0 , H_1), if the Sig (P-value) is greater than the significance level 0.05 (according to the results of the SPSS statistical analysis), the nihilistic hypothesis cannot be rejected, and therefore there can be no related relationship Statistical significance between the variables, but if the Sig (P-value) is less than the 0.05 level of significance then the nihilistic hypothesis is rejected and the alternative hypothesis that emphasizes the existence of an effect of the relationship between the two variables is accepted statistically.

Through the tables of statistical analysis, the results showed that the calculated value of (F) equals (4.905) and the probability value of Sig significantly (0.031) which is less than the significance level (0.05). This means that the regression model is statistically significant, and that there is a significant effect of the explanatory variable (X) In the dependent variable (Y) i.e.

We reject the null hypothesis (H_0) that there is no community participation in the baseline design.

The alternative hypothesis (H_1), which emphasizes the existence of community participation in master plan and its importance in the planning process, is transferred.

Thus, it became clear through testing and analyzing the assumptions of the significance of the adopted model and the effect of the independent variable,

which represents the effect of community participation on the master plan of the city in the study area.

Conclusions

1– By analyzing the primary characteristics of the study sample, the results showed that the study community has a clear deficiency of the staff specialized in urban and regional planning and in the field of working practice at the level of community participation in the local administrations involved in planning decision-making.

2– By analyzing the differences between the indicators of the social participation axis and the master plan and the indicators of the social participation axis and the planning process, it became clear that there were no significant differences and differences between the indicators. Among the changes that occur in the master plan, that is, there is an effect and relationship strength, and this means that the increase of one community participation unit in planning, then the master plan increases by 0.244 interaction units in planning.

3 – The presence of interaction and high agreement by the owners of specialists in local institutions in the study area with what came from the paragraphs in the axis of community participation in the planning process, and this gives an indication of the importance and role of local community participation in city planning.

4– The results of the statistical analysis through the coefficient of determination using the simple linear regression method showed that there is reliability and an average value of significant social participation, and this explains that the social participation affects the changes that occur in the master plan as a case.

5– Descriptive analysis of the answers to the indicators of community participation and master plan showed that there is a weakness in the level of cooperation and coordination between the strategic planning committees and civil society organizations in the field of master plan and expressing opinions and proposing projects

6– Planning decisions that are based on the use of modern planning methods that are effective in achieving community participation in master plan, adopt the principles of preserving natural resources, achieving functional inclusion, and reducing social, economic and urban differences.

Recommendations

1– Developing the work of local administrations through adopting a clear methodology and planning vision based on community participation and modern planning concepts when making a decision, especially with regard to the process of preparing and building the master plan.

2– Supporting and developing societal capabilities and workers in local administrations, through holding seminars and training programs that encourage community participation, through government institutions, academic and educational institutions.

3– Emphasizing on increasing the local institutions with specialists in the field of urban planning and the field of community participation for what the nature of the work of these institutions requires.

4– The necessity of emphasizing the participation of the competent representatives of the local community in collecting information and analyzing it in the field, developing planning options, and holding public seminars to discuss the master plan and announcing participation in suggestions and objections.

5– Relying on the empowerment strategy for community participation, which adopts the bottom–up planning approach, and thus contributes to identifying the problems of the local community, and increases communication channels between the population and the executive authority, and provides an opportunity for all workers to participate effectively in all stages of development.

6– Developing the process of community participation in the master plan of the concerned stakeholders, using the principles of the integrated city, which is characterized by mixed use of the land and the proximity of uses, achieving ease of access and increasing community participation and interaction.

7– Improving and increasing the level of cooperation and coordination between local administrations, local community organizations, stakeholders and the common sector, and giving them the opportunity to express opinions and propose projects in the master plan.

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