

Evaluating Quality of Master Plans: A Case Study of Master Plan of Amritsar: 2010-2031

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ARTICLE INFORMATION

Received: December 10, 2019
 Revised: January 14, 2020
 Accepted: January 14, 2020
 Published online: January 27, 2020

Keywords:

Evaluation, Master plans, Planning theories,
 Evaluation principles, Evaluation criteria,
 Quality of Master plans

ABSTRACT

Master plan document is aimed to act like a tool for promoting growth and to regulate the existing and forthcoming expansion of cities. It is a course of action rather than conclusive statement giving vision of next two to three decades keeping in mind the upcoming growth of population, economic development potentials, infrastructural requirements and ecological ameliorations expected to occur for a particular area. Therefore, the quality of this document is of great concern. Literature reveals that the physical ambience emerged in the existence of Master plans has not been as desired (Tiwari, 2002 as cited in Nallathiga 2006) and the documents and the results have not been fruitful (Meshram, 2006) requiring a reform in the traditional Master plan making advent by blending evaluation at the outset of plan making exercise making it a fundamental part of it. For improving the character of Master plan documents and plan making processes, an evaluation criteria has been prepared by the author based on the theoretical framework and evaluation principles given by various authors in various time periods. An attempt has been made to analyze the quality of Master plan Amritsar prepared by SAI consulting private limited, based on the criteria developed and the conclusions have been drawn from the results for further improvements in the quality of Master Plans of Indian cities.

DOI: [10.15415/cs.2020.72007](https://doi.org/10.15415/cs.2020.72007)



1. Introduction

Master plan is aimed to act like a tool for promoting growth and to regulate the existing and forthcoming development of towns and cities. It is a course of action rather than a conclusive statement giving vision of next two to three decades envisaging the upcoming growth of population, economic development potentials, infrastructural requirements and ecological ameliorations expected to occur for a particular area. This document ascertains entitlement of land for diverse uses, provision of civic infrastructure and development of areas of conservation and along with this providing detailed zoning regulations to regulate the development of the area. Therefore this document not only involves plan preparation exercise but execution of plan and quality of this document is of great concern. The conventional Master Plan advent in India is criticized due to dearth of flexibility, large time period, delays in preparation, fruitless public participation, weak information base, lack of financial planning and unsuccessful plan monitoring and execution (Nallathiga, 2009). Due to unproductive

implementation of plans, the planning proposals are of no use and have become immaterial. Thus, over the years, a contrast among the outlines of Master Plan document and actual happenings on the ground has been emerged and it seems that the applied context of Master Plan advent is not as faulty as is its design, the conceptual affairs and the procedures (Meshram, 2006). Therefore to identify the faults in the plan making processes, to improve the character of master plans and to achieve better execution mechanism an evaluation criterion/framework is required for Indian cities. In this paper the author argues that to understand the physical aspects of planning, ongoing evaluation and monitoring is necessary and that can be achieved by making evaluation part of plan making process. In the first section of the paper, theoretical framework and transformation of evaluation theories and methodologies have been discussed with general principles of evaluation. In the second section, a comprehensive evaluation criteria has been developed to evaluate the master plans in India based on the literature study. The third section comprises of analysis of Master plan document and the plan making process

adopted in Amritsar city based on the criterion developed. In the fourth section conclusions have been drawn based on the findings of the analysis and the surveys and interviews conducted by the author.

2. Theoretical Framework

A. Urban planning and Evaluation

In recent decades, important transformations have been noticed regarding evaluation in urban planning (Oliveira and Pinho, 2004). The most important is the shift of emphasis from the plan content to plan making process. The literature reveals that evaluation and planning complement each other and cannot be separated (Khakee, 1998). Due to major shifts in planning and evaluation theories starting from the pioneer Rational Comprehensive theory to Communicative theory and up to sustainable development theories, the methods of evaluation also have been changed from traditional Cost Benefit analysis to Environment assessment and sustainable development through use of more scientific multi criteria analysis. The purpose of evaluation in planning clearly confines to examine whether plans help in improving the quality of actions of the plan making process (Khakee, 2000). As per Baer (1997), evaluation is performed broadly at three stages, first when among many alternative plan proposals one plan is to be selected (Ex-ante evaluation). Second, to judge the direction of growth, during implementation (On going evaluation) and third in order to find out if the plan achieved the stated objectives or not, after the plan is implemented (Ex-post evaluation). In the beginning, the literature on evaluation in planning had been focused on ex-ante evaluation only and ongoing and ex-post evaluations were not in picture (Ho, 2003; Lichfield, 1996, 2001a, 2003; Voogd, 1997 as cited in Oliveira and Pinho, 2009). But in the last two decades the process evaluation and ex-post evaluation have also been worked upon and in the year 2009 Oliveira and Pinho have given a methodology called PPR (Plans, Processes and Results) and in 2010, Laurian et al developed POE (Plan Outcome Evaluation), focused on outcomes of plans.

B. Principles of Evaluation

Lack of the evaluation in the plan making process was observed by Lichfield, Kettle and Whitbred (1975).

Lichfield (2001) also advanced a set of principles such as:

- i. At the outset the planning team should involve the evaluator.
- ii. Evaluation criteria and procedure needs to be developed together and planning team should work in collaboration with the evaluation team.
- iii. The planning team should incorporate evaluation criteria while preparing design criteria.
- iv. Data collection should include the data of evaluation too.
- v. On-going plan evaluation should be done for improvement in plan implementation.
- vi. Policy achievements are tested by Ex-post evaluations.

Here we notice that all the principles revolve around integrating evaluation in the planning process from the beginning and importance of ex-ante, ongoing and ex-post- all three stages of evaluation in improving the planning process.

Israeli planners Rochell Alterman and Morris Hill have written regarding implementation of urban landuse plans (July 1978) taking a case study of Krayot area in Israel and have given three dimensions for analysis of plans- political factors, attributes of plans and urban system factors. They have ended up with the statement that there is a tendency of bigger deviation in large public bodies as compared to small private entrepreneurs. That was a positive change from traditional master planning in Israel. But, the evaluation was not part of planning process. Here although the main constituents of the plan have been evaluated based on the planning techniques used, but not a clear criteria/methodology was evolved based on which other plans could be evaluated.

Later on many professionals worked on plan evaluation for example Alaxender and Faludi (1989) gave Policy Plan Implementation methodology, Baum (2001) worked on community initiatives evaluation, Alexander (2002) developed normative criteria for plan evaluation, performance measurement was done by Carmona and Sieh (2005) and about one decade ago, the authors Oliveira and Pinho (2009) developed the PPR (Plans, processes and results) methodology based on some evaluation principles such as:-

- i) Not only plan documents but practical application of the same should be evaluated, as the results will support the document and the process both.

- ii) Evaluation theory must be the base of evaluation methodology, as this linkage will fill the gap of theory and practice.
- iii) The evaluation methodology needs to be designed as per the requirements of object of evaluation and the specific criteria and the evaluation questions should be framed accordingly.
- iv) The comprehensive evaluation of all elements - policies, plans, processes and the results should be undertaken simultaneously.
- v) The development of evaluation process and planning process needs to be done simultaneously and design of evaluation process needs to be in tune with planning process.
- vi) Different methods should be used to evaluate the different purposes as per the demand.
- viii) The evaluation results and planning practices also need to be evaluated and be presented to distinctive listeners.

All the above principles also talk about integrating evaluation in the planning process at the outset

and in the end using evaluation results for further improvement in the plan making processes.

C. Place of Evaluation in Indian City Planning

After Industrial revolution, large number of migrants from rural areas were coming to cities in search of better opportunities and to manage this rapid urbanization, more and more plans for the cities have been prepared to guide the city development. In India, the general process of planning in various states is regulated by the respective State Town Planning Acts and in accordance with UDPFI (Urban Development Plan Formulation and Implementation) guidelines formulated in 1996 to regulate the general process of planning, these guidelines were revised in the year 2014 as URDPFI (Urban and Regional Development Plan Formulation and Implementation) guidelines and as per these guidelines, evaluation and review is part of planning process as depicted in the figure below:-

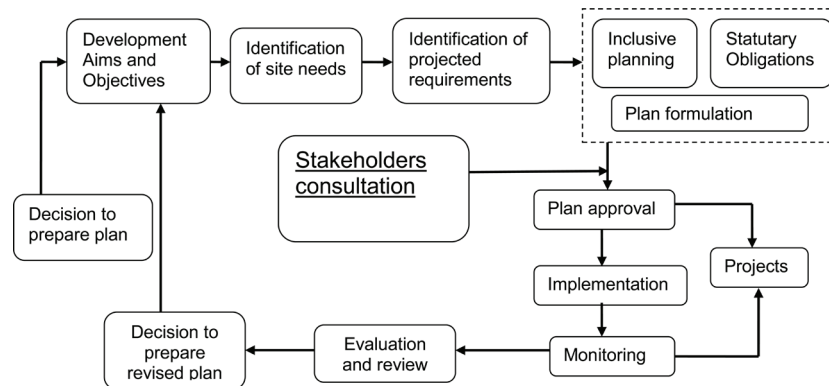


Figure 1: General process of planning in India. (Source:- URDPFI Guidelines 2014, Ministry of Urban Development (2014:23)).

But unfortunately, the evaluation part of plan document is mostly ignored by the planning professionals and has been kept out from the plan making process of which it forms a fundamental part (Tiwari, 2002 as cited in Nallathiga 2009) and have not been fruitful neither in the plan documents nor in the outcomes (Meshram, 2006). Since, master plan which is the only tool to regulate the development of all Indian towns and cities is not evaluated at desired stages, the whole planning will go in wrong direction as these plans are prepared for a duration of twenty to twenty five years. So, it becomes necessary to continuously monitor and evaluate these plans to avoid uncertain results and invent innovative ideas for the improvement of Planning process.

D. Status of Master Plans in Punjab

The Master Plans in Punjab are prepared under The Punjab Regional and Town Planning and Development Act 1995 and section 76 of the Act states of revision and amendment of Master Plans based on the fresh surveys after ten years of notification of Master Plan. Till now 43 Master Plans of Punjab have been notified and out of these 12 have been notified in the year 2009-2010. Therefore, as per section 76 of PRTPD Act, review of these Master Plans is required and fresh surveys need to be conducted and based on these, amendment in Master plans of these cities needs to be done, which is practically not happening. Therefore there is a dare need to make evaluation part of planning process for improving the standard of Master Plans in Punjab.

3. Construction of Comprehensive Evaluation Criteria

Based on the above principles and keeping in mind the transformation of planning and evaluation theories and the debate between the Rational comprehensive model and Communicative planning model; sustainable development and the issues like political dimension, public participation, consensus building regarding the proposals of Master Plans and availability of resources, a comprehensive evaluation criterion comprising of seventeen criterion for the evaluation of plan document, plan making process and plan implementation for Indian cities has been prepared by the author, which is as under:

A. Rationality

Rationality is an important criterion as a rational plan making process is assumed to be complete, consistent, transparent and optimal.

B. Procedural Validity

For evaluation of plan making process procedural validity is very important criterion. This criterion is further sub-divided as expert advice, selection criteria of experts, manpower involved, quality of Existing Land Use (ELU) plan, quality of Proposed Land Use (PLU) plans as well as zonal plans and legal aspects. This criteria is also applicable on plan making process along with plan document analysis.

C. Data and Methodology

Data and methodology is also an important criteria in plan making process as data is the base of planning. This criteria can be further subdivided into specific criterion such as quality of data, selection of norms and standards and quality of analysis. The criteria along with all its sub criterion are applicable to plan making and document analysis both.

D. Transparency/Quality of Communication

In communicative planning the central axis of evaluation is the planning process quality and program of actions. Here important concerns are not only effectiveness and legitimacy but integrity and mutual understanding are also given due importance. Since master plan document has to serve the public. So, here the study regarding involving the general public in the plan making process is of utmost importance. It is

also necessary to study that whether the document is easily understandable by the general public, for whom it has been prepared? The qualitative and quantitative both the terms are important here. As far as plan making process is concerned this criterion is applicable in context of involvement of other departments for their expertise in the analysis that is qualitative public participation, quality of input received etcetera and the part of planning agency to facilitate. But in case of document analysis it means the quantitative analysis that is number of written objections/remarks received leading to the reforms in the plan content. The other meaning of quality of communication is the language used, maps and figures used to explain data and methodology, sources used etcetera in the plan document.

E. Context

This criterion is important for plan document analysis. The reasons behind making of the document that is the function of the plan, information regarding political/legal context, role of planning agency, administrative authority, implementation techniques, financial strategy and funding etcetera are the main sub-criterion of this criterion.

F. Scope

This criterion is also applicable to plan document analysis. It shows the connection of Master plan to its surroundings. The questions related to this criterion will be the suitable issues considered for example physical, economic, social, political, cultural, environmental etcetera. The issues related to efficiency, equity and predictability, distribution of benefits and costs among different groups and interests, relocation/displacement implications, fiscal/financial implications, legal implications etcetera also need to be addressed in this criteria.

G. Internal Coherence

This criterion is applicable to both that is plan making and plan document analysis. Main constituents of the plan- the land uses proposed, the urban systems involved and the implementation mechanisms narrated are analyzed regarding their affinity to the plan objectives. For determining the affinity between the landuse proposals, the objectives stated and urban systems involved impact matrix can be used.

For analyzing the affinity of plan objectives and implementation mechanisms multi-criteria analysis can be used.

H. External Coherence

This criterion is also applicable to plan making and plan document analysis both. For analysis of external coherence the plan is compared in the relation to the surroundings. The planning proposals should be in tune with the proposals of another policy/program for the same area. The focus of comparison of different plans is on the territory, objectives and implementation mechanisms.

I. Relevance

Relevance is an important criterion and determines the ground situation for preparation of plan. SWOT analysis can be used to identify city needs and these needs are then compared with the main aims and objectives of the plan using impact matrices.

J. Commitment of Human and Financial Resources

This criterion assesses the availability of resources, their types and corresponding relationship between plan operation and allocation of resources. The first two parts are applicable in plan making evaluation and the third part of this criterion is applicable in document analysis. In the first part comparison of manpower and financial support available is done. In the second part for human resources the quality of staff that is their background is analyzed and for financial part the analysis of the association between initial capital and the running costs is done. In the third part the relationships between a specific plan type and the human assets required for its successful implementation is analyzed.

K. Implementation Mechanism

It is an important criterion for judging the working of the plan. Instruments for implementation like ordinances, regulations, budgets and schedules etcetera are analyzed. Implementation proposals, their scheduling and co-ordination are the key questions here. This criterion is applicable to plan document along with plan implementation analysis.

L. Conformity

This criterion has been taken from conventional evaluation approach. The level to which the operational

decisions conform to the aims and objectives are the key questions here. The other questions may be- was the plan followed, or is it being implemented?

M. Optimality ex-ante

This criterion is applicable in plan making process and is determined by assessing relationship between aims and means envisaged by the decision makers in the process of taking decisions.

N. Optimality ex-post

Optimality ex-post is evaluated next to conformity. If the effects are the same for which the plan was meant for, then the next question arises whether these effects are optimal? So, this criterion is applicable after implementation of plan.

O. Utilization

Utilization is an important criteria, as it aims at integrating the elements from two theories- from decision centered view of planning to performance based approach. In both the cases the plan is Centre stage. Here the criteria has two main focuses- political influence on plan and other planning policies and second the reverse that is the influence of plan and planning execution on the political parties. This is judged through discussions and political discourses.

P. Effectiveness

There are two possible ways to analyze this criteria- first, the involvement of the local authority, it may be through the urban development projects and second through process of control of development. In Punjab zonal plans are prepared and the effectiveness can be judged from these zonal plans compared with the provisions in the main plan in two parts- for the priority areas mentioned in the main plan and second the provisions of the zonal plan follow or contradict the provisions of the original plan. Here implementation of plan is also analyzed through measuring/weighing the level to which the proposals have been applied (street systems, public space provisions etcetera).

Q. Direction

This criterion corresponds to the comparison between the city without a plan and the city due to the presence of the plan. Here sub criteria of demography, transport, mobility and housing etcetera are important.

4. Analysis of Master Plan Making Process and Plan Document of Amritsar, Punjab

To analyze the Master plan document (prepared by SAI Consultants Private Limited) based on the evaluation criterion developed, many surveys and interviews were conducted by the author and the data files of the

Master plan preparation of Amritsar were searched and the plan preparers and various stakeholders like general public, sarpanchs of villages, real estate developers and industrialists from Amritsar were interviewed and scores were given based on the weightage assigned to the sub criterion and the findings of the analysis are as given in the table:-

Table 1: Evaluation results for Master Plan making process and the plan document of Master plan Amritsar

General evaluative criteria	Specific criteria	Evaluation Questions	Scores /inferences from survey
Rationality	Delineation of LPA	What was the basis for delineation of LPA? Was it within legal provisions? What other factors were responsible for the delineation of LPA?	42.6 Three times corrigendum was given in the newspapers for rectification in the boundaries of LPA. The LPA is too large and no surveys were conducted to find the dependency of the town/ towns before delineating the LPA
	Prediction	Whether all physical and socio-economic drivers have been taken care of while identifying problems and gaps?	71.54 Most of the parameters are discussed with key issues and ongoing projects
		Whether future requirements of all the land uses have been properly worked out?	46 Surveys were conducted for housing conditions, education and health facilities. No reason /comparison has been shown for adopting the methods and no bifurcation of social infrastructure has been done
	Planning Considerations	Are plan formulators/preparers have clarity regarding the criteria for plan making?	67.34 Out of seven officials interviewed, all had concept of planned development, socio-economic development and development controls in their mind, four of seven talk of heritage and tourism, three of seven talked of liberalization and sustainability and two talk of resource mobilization
		Are goals and objectives framed as per city needs?	58.33 No objective talks of border settlement and industrial/ economic development and no specific objective has been framed keeping in mind slum upliftment
		Are the proposals worked out as per the objectives?	33.75 Some proposals are partially complying and some are contradicting with the objectives such as compact development is not visible in proposal

		Are current policies in force considered while making the proposals?	12.5 Except for National policy for street vendors and JNNURM, the Master plan document is silent about other Centre and State policies	
	Legitimacy	Are legal provisions regarding Master plan preparation been followed or there is some change in the process adopted from legal provisions?	100 Legal procedures have been followed	
		How much time was taken for each stage of master plan preparation? Was it within legal framework?	60 Time taken for ELU and PLU preparation was more than as given in legal provisions	
		Whether Master Plan Amritsar was notified as per the legal provisions of PRTPD Act?	100 Legal procedures have been followed	
		Is there any change required in the legal provisions for any of the stage of master plan?	Amritsar officials were of the view that fresh surveys need to be conducted after every five years, instead of ten years	
		Have the legal connotations been considered while formation of plan?	Since ELU and PLU is not Khasra based, there is problem in exact location of a particular piece of land leading to legal complications.	
Procedural validity	Expert Advice	Any expert advice sought for the analysis of LPA?	58.92 Expert advice was sought through think tank members but members from Sector boards and authorities, large, small, micro and medium scale enterprises, land and real estate developers, RWA, community service organizations, NGO, slum dwellers were not invited.	
		Whether expert advice has been taken for calculating future requirement and identifying gaps in the infrastructure?		
	Selection criteria of experts	How many members from public, private and social sectors each had been selected as experts?		
	Manpower involved	Qualification of staff conducting surveys/ground truthing and other tasks such as preparing ELU, analysis of data, swot analysis, report writing?		60.16 For ground truthing as against 14 persons required only 4 were there and for Master plan preparation, there was team of experts in the SAI consultancy firm except for transport, urban infrastructure, social-economic, urban financial planner and a legal expert
		Who else, except planning staff was part of plan making exercise (Staff from divergent agencies or departments, stakeholders, politicians)?		
	Quality of ELU	What was the Quality of survey conducted for preparing ELU?		85 Satellite imagery is the base for preparing ELU (cartosat-I data of 2.5 m resolution) and for core city area (0.6 M resolution). Ground truthing verified thrice.
		Whether ELU is revenue based or not?		
Use of modern softwares such as G.I.S. taken or not?				
Right colour coding used in the map or not?				
		Ground truthing verified or not?		

		How many times ground truthing was verified?	
		Whether every land use has been depicted clearly or not?	
		Do these land uses further required to be bifurcated or not?	
	Quality of Plan and zonal plans	Does the plan correspond to the future projections worked out for LPA?	14.44 The residential land use is more than ten times, commercial is less than required and industrial is one and a half time its requirement and no proposal for water supply, sewerage, power, educational, medical and Except for environment, recreational facilities
		Are Development Control regulations detailed enough for proper regulation of future development?	81.77 Except for environmental considerations, rest of development controls are given
		In how many zones Master Plan Amritsar has been divided?	0 No proposal for zonal plans has been given in the document
		How many zonal plans have been prepared and notified?	
Data and methodology	Quality of Data	Are the zonal plans revenue based?	
		Are the provisions mentioned in Master Plan document regarding provision of public facilities have been incorporated in the zonal plans?	
		Input from concerned departments taken or not for delineation of LPA?	55 Input was taken from other departments and a format was also circulated to various departments but the information received was incomplete. Surveys were conducted by members of SAI team regarding traffic, water supply, educational institutes, hospitals and other structures
		Whether some standard format/ Performa were circulated to the departments for collection of data?	
	Whether information received from the departments satisfactory? If not, whether some efforts were made by the department to get the relevant information/data?		
	Whether primary surveys were conducted by the department?		
	Selection of Norms and standards	What norms and standards have been used for the analysis? Can there be any other norms/ standards for analyzing LPA?	50 For traffic and transport no guidelines have been used and for rest of infrastructure UDPFI guidelines have been used

	Quality of analysis	Have all the strengths/ opportunities and weaknesses/ threats of LPA been discussed? Are clear strategies for attaining Vision-2031 and overcoming weaknesses of LPA been worked out?	40 Proposals have been given but implementing agency and mechanism not mentioned, so strategies are not clear
Transparency/ Quality of communication	Quality of input received	Whether some Performa was circulated to the Think tank members for taking their input for the analysis of LPA?	22.5 No performa was given to the think tank members, only suggestions were received from State convener INTACH regarding conservation and restoration of heritage and industrial development and traffic management by other members
		Did the members provide the required input?	
		Was the input given helpful in the SWOT analysis?	
	Public Participation	Quality of display and medium used for public participation	47.75 The report was not published and is required to be in Punjabi also. The plans were circulated to 11 MLAs and 2 MP's also and were displayed on internet also, but need to displayed at Zila parishad office also.
	Analysis of public participation as per survey conducted	25.2 Only 302 objections out of 16.6 lakh population were received regarding Master plan proposals and only 13% of rural population is aware of Master plan	
	Consideration of Objections	How many objections were accepted/ rejected? Was public informed after consideration of objections? Was Master Plan again published for inviting objections/suggestions before notification of Final Master Plan?	20 As neither objectors were informed nor amended Master plan was again published
Context	Purpose	Is the purpose of plan explained (for example study, information, action etcetera)?	50 The main function of the plan is reflected in inception report. Municipal corporation Amritsar has been identified as primary agency for delivering municipal services. Financial aspects of implementing agencies have been discussed and an investment plan has been given.
	Political/legal context	Is the political and legal background of the plan explained (pertinent issues, state mandates etcetera)?	

	Roles of different agencies	Is the role of preparing agency/ firm and executing agency explained?	
	Funding	Is the source of finance for the plan shown (Centre, state, local authority)?	
Scope	Planning issues	Have all the important issues (physical, social, economic, political, cultural, environmental, sustainability etcetera) have been considered?	31.66 Distribution of benefits and costs, legal implications and relocation implications have not been mentioned. Planning issues have been given but implementation strategies not mentioned
	Other issues	Have issues of ability, fair distribution and uniformity been considered?	
	Distribution of costs and benefits	Has the distribution of benefits and costs among different groups been considered?	
	Relocation/displacement implications	Have relocation/displacement implications been considered?	
	Fiscal/financial implications	Have fiscal/financial implications been considered?	
	legal connotations	Have the legal connotations been considered?	
Internal coherence (Planning process)	Planning agency vs implementing agency		
(Plan document-linkages affinity among the plan objectives with other plan parts)	Land uses	Whether the land uses envisioned are in affinity with plan objectives?	26.67 The urban systems and land uses have been proposed keeping in mind the plan objectives, but due to lack of implementation mechanism and funding, coherence is missing
	Urban systems	Whether the urban systems (Environment, built heritage and mobility) proposed are in affinity with the objectives?	
	Implementation mechanism	Whether the Implementation mechanisms are coherent with plan objectives?	
External coherence (Planning process)	Planning agency vs other departments		
(Plan document-comparison of plan provisions with other plans/ policies)	Territory	What is the relationship of the Master plan to other plans in terms of provincial model?	10 External coherence is there to some extent in terms of territory. None of Centre and state policies have been taken care of in framing the objectives neither any implementation mechanism has been given
	objectives	What is the relationship of the Master plan to other plans in terms of objectives?	
	Implementation mechanism	What is the relationship of the Master plan to other plans as far as implementation mechanism is concerned?	
Relevance	Needs of the city Vs goals and objectives	What is the affinity among the plan objectives and needs of the city?	38.33 No proposals have been given for border settlement, social and physical infrastructure, and heritage and tourism and no implementation mechanism has been given in the document
	Land uses and urban system	What is the affinity among the land uses envisaged and the urban systems proposed and the needs of the city?	

	Implementation mechanism	What is the affinity among the implementation mechanisms of the plan and the needs of the city?	
Commitment of human and financial resources	Availability of resources (human/financial)	How many human and financial resources are available with the planning agency?	60 As human, financial and other resources are good and planning performance is satisfactory as per the available resources
	Type of available resources	Which types of other resources are available with the planning agency/implementing agency?	
	Liaison between allocation of resources and planning performance	What is the affinity among planning performance and the utilization of resources?	
Implementation mechanism	Instruments for implementation	Are all the instruments for example ordinances, regulations, budgets, schedules and manpower etcetera given in the plan document?	47.5 As no schedules have given and manpower involved for implementation is also not much, moreover no implementation proposals and time span has been worked out
	Implementation proposals	Is implementation mechanism worked out during plan making process?	
		Are the fiscal provisions regarding implementation been taken care of and recorded?	
	Implementation scheduling	Are priorities for implementation worked out?	
		Is time period for plan implementation calculated?	
Co-ordination	Whether the instruments for implementation mechanism have proper co-ordination?		
Conformity (of the aims and objectives in terms of)	Operational decisions	To what degree do the operational decisions conform to the aims and objectives of the plan?	Can be assessed after completion of plan period
	Implementation decisions	To what degree do the Implementation decisions conform to the aims and objectives of the plan/policy?	
	Actual outputs	To what degree do the Actual outputs conform to the aims and objectives of the plan?	
	Outcomes	To what degree do the outcomes conform to the aims and objectives of the plan/policies?	
	Impacts	What are the impacts of the policies? Do they conform to the Goals and objectives of the plan?	
Optimality exante	Relationship between aims and means perceived by the decision makers	Are the courses of action prescribed in the policy/plan optimal?	24.375 The formulation of objectives are ideal but no phasing and implementation strategy has been given in the plan document

Optimality expost	Relationship between aims and means achieved	Were the strategies and courses of action prescribed in the policy/plan in fact optimal?	Can be assessed after completion of plan period
Utilization	Influence of the plan and of the planning activity on the local political power	Was the plan/policy used or consulted in making operational decisions?	Till date plans are being utilized but scores can be assessed after completion of plan period
		What were the reasons for the non-utilization?	
Effectiveness	Process of development control	Do the provisions given in the main plan correspond to the provisions of zonal plan?	Zonal plans have not been prepared after eight years of notification of master plans
	Degree of implementation	Up to what extent the proposals of zonal plan/main plan are being implemented?	Can be assessed after completion of plan period
Direction (comparison between - city without plan and with plan)	Demography	Did the existence of plan have some effect on the density distribution, size and structure of population?	Yes to some extent
		Did the existence of plan have some effect on the sociological factors of the population for example educational quality, social class etcetera?	Yes to some extent
	Transport	Did the existence of plan have some effect on the Road network of Patiala/Amritsar?	Yes
	Mobility	Did the existence of plan have some effect on the physical and social mobility of people?	Yes to some extent
	Housing	Did the existence of plan have some effect on the housing characteristics of LPA?	No
	Infrastructure	Did the existence of plan have some effect on the infrastructure of LPA?	No
	Utilities and services	Did the existence of plan have some effect on the utilities and services of LPA?	No

Source: Compiled by author based on the analysis done in the year 2018

Note: The specific criteria given in the table above have been further subdivided into some evaluation questions, which in turn are subdivided into some parameters and have been analyzed by assigning some weightage to each and giving scores as per the state of achievement of the same in the plan document or the plan making process as the case may be and then average score of these parameters is the score of each specific criteria and the average score of each specific criteria is the score of the criteria of evaluation. For example, for calculating scores of Rationality, the first specific criteria delineation of LPA was divided into 11 parameters such as administrative boundaries, geographical features, means of communication, distribution of population etcetera and the average score of these parameters is 42.6%, similarly next specific criteria prediction was divided into two matrices having 13 and 5 parameters respectively and the average scores of these parameters is $71.54+46/2=58.77\%$, for planning considerations 4 matrices having 7, 5, 10 and 8 parameters were analyzed and the average scores of these parameters is $67.34+58.33+33.75+12.5/4=42.98\%$ and legitimacy was analyzed based on 5 evaluation questions containing 8 parameters and the average score of the same is 75%. The average score of Rationality is the average of all the four specific criteria that is $42.6+58.77+42.98+75/4= 54.84\%$ similarly rest of the scores have been calculated based on detailed deliberations of several indicators of around seventy five evaluation questions related to plan document and plan making process of Amritsar.

In the above table if the average scores for each criteria are calculated considering above 90% as excellent, above 80 to 90% as very good, above 60 to 80% as good, above 40 to 60% as fairly good, above

30 to 40% as poor and below 30% as very poor, we find that the average scores for Transparency/Quality of communication, internal coherence, external coherence and optimality ex-ante are very poor, moreover the scope and relevance are also scoring poor scores and the rest of the criteria are scoring fairly good. The overall score for the plan making process and the content of Master Plan Amritsar comes out to be poor. The causes of this were enquired by the author from the general public, sarpanch of villages, municipal councilors, stakeholders like developers, industrialists and bureaucrats and it was found that lack of proper surveys, expert advice, external coherence between planning and other departments, internal coherence between planning and implementing agencies are the major reasons for the poor outcomes. It was also observed that if every stage of planning process was evaluated then the average scores would be better than these.

Conclusion

After devoting so much time, money, resources and professional input for the preparation of Master plans for Indian cities, if the quality achieved is not satisfactory, it is off course a matter of serious attention for Indian planners. A good Master Plan needs to be transparent, consistent, practical, flexible and user friendly. As the scores of Master Plan Amritsar depict that the plan is not transparent, coherent and optimal, hence it is leading nowhere to the city residents. If the same plan could have been evaluated in various stages of plan making exercise then the results would have been better than the present results. Moreover, as many of notified Master Plans of Punjab have completed ten years, therefore this is the right time to bring reforms in the planning practice to reduce the gap between planning theory and practice and to make evaluation part of plan making process to enhance the quality of Master plans prepared for Indian cities.

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Creative Space

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Volume 7, Issue 2

January 2020

ISSN 2321-3892

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