

**DISTORTION ANALYSIS IN IMPLEMENTATION OF
MUNICIPAL SPATIAL PLAN
(Case Study : Padang Panjang Municipality)**

THESIS

A thesis submitted in partial fulfilment of the requirements for
the Master Degree from University of Groningen and
the Master Degree from Institut Teknologi Bandung

by:

**HENDRI YANI
RUG : S1823531
ITB : 25407031**

Supervisor :

**Dr. JOHAN WOLTJER (RUG)
Prof. Ir. TOMMY FIRMAN, M.Sc. (ITB)**



**DOUBLE MASTER DEGREE PROGRAMME
ENVIRONMENTAL AND INFRASTRUCTURE PLANNING
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AND
DEVELOPMENT PLANNING AND
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SCHOOL OF ARCHITECTURE, PLANNING AND
POLICY DEVELOPMENT
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2009**



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and

Environmental and Infrastructure Planning
Faculty of Spatial Sciences
University of Groningen

Approved by
Supervisors

Date: 2009

Supervisor I

Supervisor II

Dr. Johan Woltjer
(RUG Supervisor)

Prof. Ir. Tommy Firman, M.Sc.
(ITB Supervisor)

Abstract

Distortion becomes something that prevalent to occur during implementation of Municipal Spatial Plan. Unfortunately, distortion is often judged as negative meaning which is easily got only by comparing outcome of planning with its original plan without considering the reason why this distortion occurred. Until now, some of local governments still judge type of distortion from this way, even local government of Padang Panjang Municipality as case study in this research does not has the term of positive or negative distortion. It only has one term 'distortion' and this distortion only has negative meaning. Some people easily think if implementation of a Municipal Spatial Plan or its outcome is not appropriate with the original plan, it means distortion has occurred and it means the planning is fail.

This research aims to analyse distortion in implementation Municipal Spatial Plan which consists of; how to determine distortion type, to know factors that cause distortion or influence the implementation of the plan, to know how to cope with these factors, and to know to what extent the role of Municipal Spatial Plan in Padang Panjang Municipality as study area in this research. Furthermore, this research is aimed to be useful for policy maker or local government, planners, next researchers, and whoever that involved in Municipal Spatial Plan in order to shift the way of thinking in analysing of distortion that occurred in implementation of Municipal Spatial Plan.

The research uses quantitative methods and qualitative methods. Quantitative methods is used in the beginning for data processing by using conformance approach. Conformance approach is statistical approach to calculate and compare spatial planning data with development practice data or planning outcome. The output of this analysis will produce distortion value in implementation of Municipal Spatial Plan. It will prove that there is distortion in implementation of Municipal Spatial Plan. Subsequently, qualitative method with descriptive analysis is used to analyse distortion type by using performance approach. This method is more used to analyse factors that cause the distortion and the ways how to cope with the factors by analysing situation and policies during implementation period.

Based on case study of Padang Panjang Municipality, conformance approach gives negative distortion. On the other hand, from this research is proven that distortion possibly becomes positive distortion if analysis uses performance approach because there are many positive reasons that cause this distortion perforce occurred. The reasons can be internal factors or external factors. Based on it, actually Municipal Spatial Plan of Padang Panjang Municipality 1994-2004 had been done maximally, but there were many uncertainties and factors which influenced its implementation. Shortly, the plan still has significant role during this period.

Based on the understanding of Padang Panjang Municipality case study above, there are some important lessons for other planners, policy maker or local government, next researchers, and whoever that involved in Municipal Spatial Plan. The important one is to analyse distortion in implementation of spatial planning not merely uses conformance approach but more consider about performance approach. In other word, based on this research, it is proposed to use both of these two approaches. Conformance approach is used in the beginning to prove that distortion had occurred. Subsequently, performance approach will be used to analyse the type of this distortion whether positive or negative distortion with be more sensitive on factors that cause distortion not only internal factors but also external factors to make Municipal Spatial Plan more efficient and can be implemented optimally.

Finally, there are two types of recommendation which are proposed in this research; recommendation for distortion analysis and recommendation to cope with factors which cause distortion. In distortion analysis, shift the way of thinking and change approach that is used in analysing or evaluating distortion are more recommended. Meanwhile, there are also some recommendations that are provided to cope with factors which cause distortion.

Keywords: Municipal Spatial Plan, distortion, implementation, Padang Panjang Municipality, conformance approach, performance approach,

Guideline for Using Thesis

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Preface

Distortion is very prevalent to occur in implementation of a planning. People easily judge distortion as negative meaning only from conformance view. Furthermore, they have opinion that distortion indicates failure in planning. Because of that, I am interested to analyse distortion by using appropriate approach in order to shift the way of thinking about distortion in implementation of planning particularly in implementation of Municipal Spatial Plan.

By this chance, I would like to thank all people who have supported me in writing my thesis, but it is almost impossible to acknowledge all of them. First of all, I would like to thank Allah SWT for giving me a chance to study here in Netherlands and blessing me in finishing my thesis. I also would like to express my sincere gratitude to my supervisors Dr. Johan Woltjer and Prof. Ir. Tommy Firman, M.Sc for their suggestions, advice, comments, and support. Special thanks to my colleagues in Padang Panjang Municipality who support me with data and documents in their busy work. I also would like to thank Prof. Dr. A.K.F. Andreas Faludi, a very nice and busy person, for giving me some advice. Thanks for his worthing articles which really underlies my thesis. I am also thankful to Bappenas and Netherlands Education Support Office (NESO) for financial support during my study in ITB and RUG. I would also like to thank all my lecturers in ITB and RUG, staff members in ITB and RUG. I also give my huge appreciations to all my friends in DD ITB 2007 for togetherness and support.

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Groningen, August 2009

Hendri Yani

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Chapter 1

Introduction

This chapter consists of background, problem statement, research objectives, research questions, significant of research, scope of research, research methodology, structure, and research framework that provides description about what actually this research will do.

1.1. Background

Development acceleration in region is needed in order to fulfil several society needs that tend to increase from time to time. To control this acceleration and create a good development for the future, government attempts to make a good spatial planning. Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*) is one of spatial planning document that has important role in bridging planning process with its implementation. Municipal Spatial Plan is very important as guidance for development practice in one region. Additionally, plan is needed to achieve certain goals in the future (Conyer, 1984).

During implementation of Municipal Spatial Plan, inevitably distortion¹ becomes something very prevalent to occur. People easily think if implementation of a Municipal Spatial Plan or its outcome is not appropriate with the original plan, it means distortion has occurred. Unfortunately, distortion here inherently has negative meaning without analysing reasons behind it. People judge if distortion occurred in implementation of a Municipal Spatial Plan, it means the planning is fail. This way of thinking is still the same with the idea that ever been proposed by Wildavsky in 1973. According to him, planning is fail if there is anything less than total conformity.

¹ The term “distortion” is used in this research because the research discusses Municipal Spatial Plan of Padang Panjang Municipality 1994-2004 where during this period it still uses the term “distortion” but the next Municipal Spatial Plan (2005-2015) the term “deviation” replaces the term.

Generally, some people use conformance view to determine type of distortion that has occurred in implementation of spatial planning. This view only compares outcome with the original plan without considering the reasons why this distortion occurred. This conformance view asks “to what degree do operational decisions, implementation decisions, and actual outputs, outcomes, and impacts conform to the goals, objectives, intentions, and instructions expressed in the policy, plan, or programme being evaluated?” (Alexander & Faludi, 1989, p. 135).

In evaluation of a Municipal Spatial Plan, the causes of distortion are seldom to be discussed. Until now, some local governments still judge type of distortion from comparison between plan with outcome even local government of Padang Panjang Municipality as case study in this research does not has the term of positive or negative distortion. It only has one term ‘distortion’ and this distortion only has negative meaning. Meanwhile, if distortion is not only analysed by using conformance view, it could be give different result. The result could be positive distortion if we analyse the reason of why distortion occurred and what the impact.

Based on explanation above, it is important to change the way of thinking toward distortion in implementation of Municipal Spatial Plan. It will be done by proposing appropriate approaches to analysis distortion that occurred in implementation of Municipal Spatial Plan in order to know how this distortion should be determined, what the type of this distortion, what factors that cause this distortion, and how to cope with the factors that cause distortion. Finally, it is useful to achieve effective and efficient Municipal Spatial Plan for the future.

Through this research I propose to use conformance approach in which by comparing outcome with plan only to show whether distortion occurred or not. Subsequently, performance approach will be used to determine distortion type whether positive or negative distortion by considering the reasons why this distortion occurred. The performance approach is used because the conformance approach is also insufficient as indicator of effectiveness of plans (Mastop and Faludi, 1989). The reasons why distortion occurred is analysed from the plan itself and during its implementation. So what happens with the plan also becomes the key to evaluation. It is not the problem if it is followed or not (Faludi, 2000).

To show how these approaches are used and to attain better understanding, this research chooses Padang Panjang Municipality as case study based on some considerations, they are;

- a. There are many incompatibilities between implementation of Municipal Spatial Plan or outcome with plan or original Municipal Spatial Plan which makes interesting to be analysed.
- b. Padang Panjang Municipality only uses conformance approach to analyse distortion in implementation of its Municipal Spatial Plan. So, with this research, the different result can be seen obviously.
- c. Padang Panjang Municipality is a city where I work. So, by using Padang Panjang Municipality as case study I hope I can easier get information that is needed to support this research. More or less I know how Municipal Spatial Plan was made and implemented here, so it will be very useful for this research.
- d. Finally, I hope I can give significant contribution to Padang Panjang Municipality after finishing this research.

1.2. Problem Statement

Distortion becomes something that usual to occur in implementation of Municipal Spatial Plan. Unfortunately, distortion is often judged as negative meaning which is easily got only by comparing outcome of Municipal Spatial Plan with its original plan without considering the reason why this distortion occurred.

There are so many factors that cause distortion in implementation spatial plan. It can be classified as internal factors and external factors. If these factors are analysed more, it could be give different judgement to distortion that occurred. Ironically, in evaluation of a Municipal Spatial Plan, these causes are seldom to be discussed. Until now, local government particularly local government of Padang Panjang Municipality still judges type of distortion from comparison plan with outcome without considering its reasons.

1.3. Research Objectives

There are five main objectives of this research. First objective is to show that distortion is really common occurred in implementation of a Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*). Second objective is to know how to determine distortion type that was occurred. To determine distortion whether positive or negative is not enough only by comparing plan and outcome. Third objective is to know factors that cause this distortion or factors that influence the implementation of Municipal Spatial Plan. Subsequently, fourth objective is to know how to cope with these factors in order to be more sensitive on them, not only internal factors but also external factors to make Municipal Spatial Plan more efficient and can be implemented optimally. The last objective is to know to what extent the role of Municipal Spatial Plan in Padang Panjang Municipality as study area in this research.

Finally, this research is expected to be useful for policy maker or local government, planners, next researchers, and whoever that involved in Municipal Spatial Plan in order to shift the way of thinking in analysing of distortion that occurred in implementation of Municipal Spatial Plan. Hopefully, we are not only glued to conformance approach in analysing distortion but more consider about performance approach which consider the reasons why distortion occurred.

1.4. Research Questions

Based on the research objectives, I will develop this research based on five research questions as follows:

1. How do we know that distortion had occurred in implementation of Municipal Spatial Plan (RTRW)?
2. How to determine distortion type whether positive or negative distortion?
3. How does distortion can be occurred in implementation of Municipal Spatial Plan? What are the factors or reasons that caused this distortion?
4. How did the role of this Municipal Spatial Plan (RTRW)? To what extent the role of Municipal Spatial Plan in Padang Panjang Municipality as study area in this research?
5. How to cope with the factors that caused this distortion?

1.5. Significant of Research

This research is needed because it is more focus on distortion that occurred in implementation a spatial planning, particularly a Municipal Spatial Plan. So, it is not focus on planning document itself that common to be discussed in other researches. This research more focuses on distortion that occurred in implementation of a Municipal Spatial Plan by proposing appropriate approach as analysis method which never been done before in other researches. The approach which is proposed here is performance approach. Performance approach is proposed because commonly evaluation of distortion in implementation of spatial planning particularly Municipal Spatial Plan only by comparing the outcome of plan with its original plan. This view or approach is known as conformance approach. Meanwhile, in this research I propose to use combination both of them by more focus on performance approach. Additionally, this research is the first research that discusses about evaluation of Municipal Spatial Plan of Padang Panjang Municipality.

Furthermore, this research is useful for decision maker or local government, planners, next researchers, and whoever that involved in Municipal Spatial Plan in order to shift the way of thinking in analysing of distortion that occurred in implementation of Municipal Spatial Plan.

1.6. Scope of Research

There are some components that are regulated in Municipal Spatial Plan of Padang Panjang Municipality, but in this research I restrict the discussion only on structure of space utilization, particularly housing and settlement area, and education facility of Padang Panjang Municipality during 1994-2004 period of time.

This research focuses on distortion in implementation Municipal Spatial Plan of Padang Panjang Municipality connected tightly to three important components. These three components are; original plan, implementation itself, and its outcome.

1.7. Theoretical Framework

Brief theoretical framework can be seen on diagram in **Figure 1.1.** below in order to provide better visual representation.

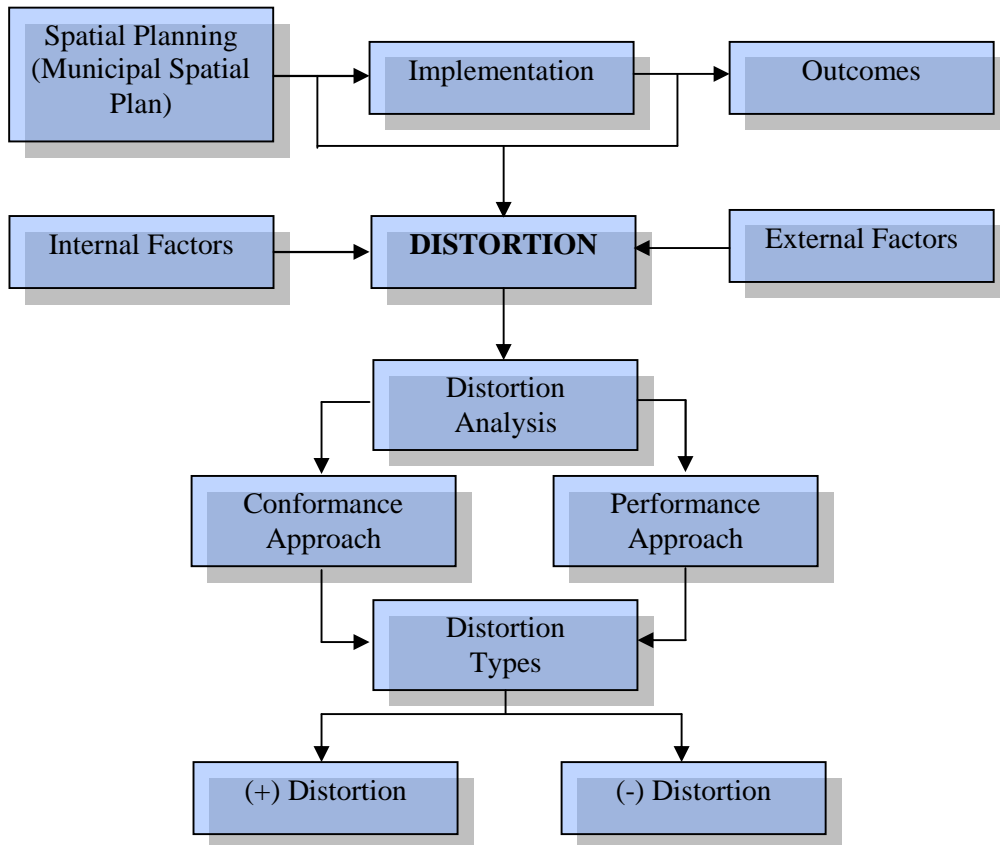


Figure 1.1. Theoretical Framework

Diagram above shows that distortion emerges during implementation of Municipal Spatial Plan. It is caused by internal factors and external factors which influence implementation of the plan. Subsequently, distortion analysis is done by using conformance approach and performance approach to get distortion type whether positive or negative distortion. Each element in this framework will be elaborated further in **Chapter 2.**

1.8. Research Methodology

This research is divided into four main activities. They are data collection, literature review, data processing and analysis. Methods that are used for each activity is described below.

1.8.1. Data Collection

Data collection is an important part that must be done as base of interpretation analysis in research. In analyzing of distortion that had been occurred in implementation of Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*) of Padang Panjang 1994-2004 is used different methods.

There are two methods in collecting data used in this research:

1. Secondary Data

There are some secondary data that are needed in this research, for instance; data in document of Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*) of Padang Panjang Municipality 1994-2004, data of area that had been developed for housing and settlement area from 1994 until 2004, data of the number of school that had been developed from 1994 until 2004 that is derived from Padang Panjang in Figures, and so forth.

Besides data, this research also needs some documents to support the analysis. The documents, for instance; document of Executive summary of Spatial Planning Evaluation of Padang Panjang Municipality 2001, document of Padang Panjang in Figures for some years, some documents of Government Regulations for example Local Regulation 14/1998 concerning Municipal Spatial Plan of Padang Panjang Municipality, document of Regional Development Program of Padang Panjang Municipality or Propeda (*Program Pembangunan Daerah*) 2001-2005 and so forth.

The data and documents are derived from some institutions in Padang Panjang Municipality, such as Regional Development Planning Board, Public Work Bureau, Statistics Bureau, and other institutions.

Collecting of secondary data was not done directly to study object but through research to documents that relate to study object (Singarimbun, 1995). Method that is used to get secondary data is technical analysis of document by reading, studying and making a note of plan document, regulation and so forth that have relationship with research topic.

2. *Primary Data*

Primary data are derived from some stakeholders in Padang Panjang Municipality who really know about problem that are discussed in this research and have knowledge about this research topic. The data are derived from interview and by using questioners. Questioner is a number of written questions that are used to get some information from respondents about something that they know (Arikunto, 1998).

Actually, collecting primary data is data collecting done by researcher directly to research object but because Padang Panjang is too far away from the country where I research, so I do discussion and interview by using telephone call and also by using questioner that I send through e-mail. The data that I got from this are used to strengthen data analysis. From this data hopefully will be known stakeholders' opinion about distortions that had been occurred in implementation of Municipal Spatial Plan, factors that were caused this distortion, the way to cope with this distortion, and the role of Municipal Spatial Plan according to them.

1.8.2. Literature Review

Literature review is divided into two steps. They are building theoretical base and elaborating Padang Panjang Municipality case. Firstly, I review literature that can give picture about spatial planning, Municipal Spatial Plan, and its implementation in general as theoretical base. The sources of this review are from academic sources such as books that are related to this research topic, journal, and articles.

Secondly, I also provide an overview or profile of Padang Panjang Municipality, literature review about its Municipal Spatial Plan, and factors that influence its implementation. It can be derived in some documents of Padang Panjang government and some regulations or policies that can be accessed from books, government publications, and also from internet.

1.8.3. Data processing and Analysis

This research uses quantitative method for data processing in the beginning. The approach that is used is *conformance approach*. Conformance approach is statistical approach to calculate and compare spatial planning data with development practice data or planning outcome. The output of this analysis will produce distortion value in implementation of Municipal Spatial Plan. The output of this analysis can prove that there is distortion in implementation of Municipal Spatial Plan.

Subsequently, qualitative method with descriptive analysis is used to analyse whether this distortion is positive distortion or negative distortion by using *performance approach*. This method is more used to analyse factors that cause the distortion and the ways how to cope with the factors by analysing situation and policies of Padang Panjang Municipality during 1994-2004.

This research is evaluation after policy of Municipal Spatial Plan or RTRW (*Rencana Tata Ruang Wilayah*) Padang Panjang Municipality 1994-2004 was done. This research is formative evaluation². So, this research can be used to improve the effectiveness of Municipal Spatial Plan of Padang Panjang Municipality in the future.

Finally, methodology of data analysis can be seen from **Figure 1.2** below.

² Formative evaluation is a type of evaluation which has the purpose of improving programmes. It goes under other names such as developmental evaluation and implementation evaluation (wikipedia, 2009).

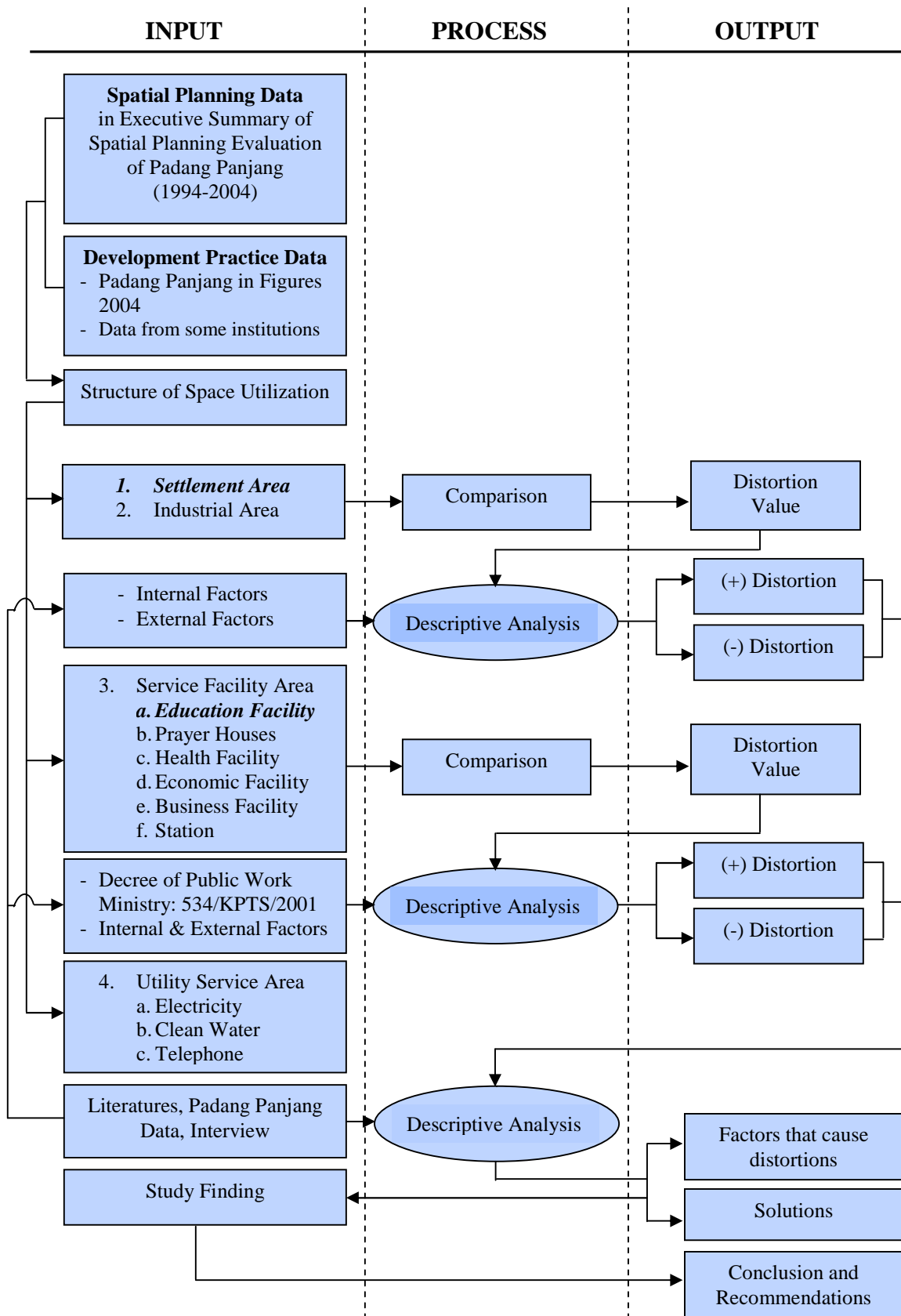


Figure 1.2. Methodology of Data Analysis

1.8.4. Structure of Thesis

This research consists of five chapters. The structure can be described as follow.

Chapter 1 : Introduction

This chapter consists of background, problem statement, research objectives, research questions, significant of research, scope of research, research methodology, structure, and research framework.

Chapter 2 : Theoretical Framework

This chapter will provide basic theory or theoretical bases which will be a guideline for analysis. It will provide the principle concepts of spatial planning, compilation process of Municipal Spatial Plan and its implementation, distortion in implementation of spatial planning, and the role of a Municipal Spatial Plan.

Chapter 3 : Municipal Spatial Plan in Padang Panjang Municipality

This chapter describes profile or overview of Padang Panjang Municipality as study area in this research. It also describes about how municipal spatial plan was made in this municipality and how it had been implemented. This chapter will be useful for Chapter 4.

Chapter 4 : Data Processing and Analysis

This chapter consists of two main parts, they are; data processing and data analysis. Data processing will show distortion value in percentage by using conformance view meanwhile data analysis will explain type of the distortion based on conformance and performance view, and what factors that caused this distortion. In the end of this chapter will describe to what extent the role of Municipal Spatial Plan of Padang Panjang Municipality 1994-2004.

Chapter 5 : Conclusion and Recommendation

This last chapter concludes distortion that was occurred in implementation of Municipal Spatial Plan particularly in Padang Panjang Municipality and provides some recommendations.

Chapters' flow diagram is provided to describe the relationship among chapters above. It can be seen in **Figure 1.3.** below.

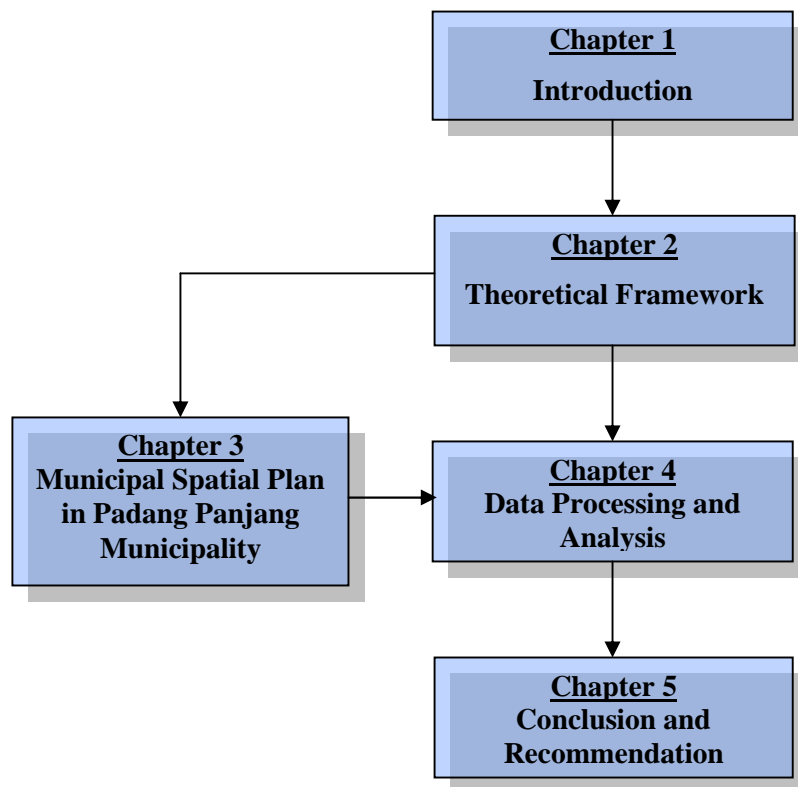


Figure 1.3. Chapters' Flow Diagram

Chapter 2

Theoretical Framework

This chapter aims to explain and explore the basic theory and relationship between spatial planning, process of its compilation and implementation, distortion that could be occurred along implementation period, and also the role of spatial planning itself based on theoretical framework in **Chapter 1**. Furthermore, this chapter is useful to give some understanding as fundamental considerations for analysing this research, particularly for **Chapter 4**.

2.1. Spatial Planning

2.1.1. *Definition of Planning*

There are many definitions that have proposed about planning. These definitions always develop from time to time influenced by knowledge development and situation around that enrich these definitions. One of the important definitions ever been stated by Conyer (1984). She defined planning as a continuous process that relates to decision making or choices on how to utilize available resources optimally to achieve certain goals in the future.

Likewise, Nakamura and Smallwood (1980) defined planning shortly in Alexander and Faludi (1989) stated that a policy or a plan can be defined as a set of “instructions ... that spell out both goals and the means for achieving those goals”. According to them there are three important components that involved in planning, they are; instruction as a policy or a plan itself, goals as something that want to be achieved and the means that will be used to achieve the goals of planning.

Furthermore, Carmona and Sieh also have definition of planning.

According to them:

“Planning is at one and the same time: a ‘regulatory’ process, but also a ‘visionary’ process; both a ‘political arena’ and a ‘legally defined’ entity; concerned with protecting both the ‘public interest’ and ‘private interests’; a ‘long-term’ and a ‘short-term’ process; concerned with ‘large-scale’ and ‘small-scale’ change; with the ‘physical and environmental’ consequences of development and with the ‘socioeconomic’ outcomes; a ‘generalist’ discipline concerned with the operation of the statutory process but encompassing a range of deep ‘specialisms’; defined by a ‘process’, but also ‘product’ oriented, concerned with the qualities of place and space; operated through ‘public sector’ intervention but increasingly relying on a large ‘private sector’ consultant base; ‘action oriented’ and a ‘communicative discipline.’” (Carmona and Sieh, 2004, page 21, in Carmona and Sieh, 2005, page 1)

There are three views of planning process that are distinguished, with their associated criteria of the quality of plans; three ideas about implementation of planning (Alexander and Faludi, 1989); first, Wildavsky (1973), he defined planning as control of the future. According to him, if planning is not implemented it means failure or it implies that planning is fail if there is anything less than total conformity. Based on his opinion, planning can not be evaluated as long as there is uncertainty.

Second, Alexander (1981), he focused definition of planning to the societal activity of developing optimal strategies for the sake of desired goal. This societal activity linked to the intention and power to implement. Planned strategies have to incorporate if they are to be effective, and which plan evaluation must take into account in assessing implementation. According to him, implementation is still important but departures from plans are still accepted as long as outcomes are beneficial because he recognises uncertainty.

Third, Faludi (1987) defined planning as a process of decision making and there is uncertainty on it. He really embraces uncertainty in his definition. The link between planning and outcomes is broken, and implementation conformity becomes ultimately irrelevant to the evaluation of planning. Faludi does not use implementation as criterion of success anymore but more focus on the quality of a plan. According to him, planning is as a process of creating a frame of reference for operational decisions. Additionally, there is flexibility in planning that is incorporated into the decision-centred view of planning from the start.

According to Faludi, change in decision situations is very possible between planning and operational decision making or implementing. So, nonconformity of outcomes or nonimplementation of plans is not necessarily failures. Shortly, he clarifies that it is not necessary to follow plan strictly.

2.1.2. Definition of Municipal Spatial Plan

Urban spatial planning or Municipal Spatial Plan is a series of activities of planning, programming, and implementation control of urban physical development focused on control of urban areas and infrastructure facilities development and basic urban areas conducted by the government, the private sector, and society.

Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*) basically is a tool that is made as guidance for the hoped future. The compilation process of Municipal Spatial Plan or RTRW Kota is based on data and information, knowledge and technology and making methods. Data scope that is used encompasses data and information of natural physic, culture and social, and interdependent relationship between planned regions with other regions. Planned activity commonly and planned development particularly is a sequent activity or a process that includes policy or plan aspect, planning aspect, implementation aspect and monitor aspect. Development planning can be formulated better, if it is supported by good fact and inline with goal or objective that want to be achieved.

2.1.3. Spatial Planning in Indonesia in General

Based on Law number 26/2007 concerning Spatial Planning, definition of Spatial Planning is a system of spatial planning process, space utilization, and control of space utilization. The scheme can be seen in **Figure 2.1** below.

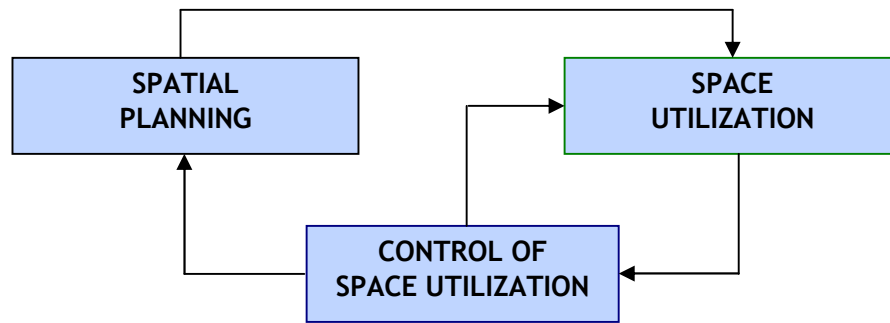


Figure 2.1. Spatial Planning Cycle

Three main process of spatial planning above are interconnected each other where;

- 1) Process of spatial planning that produces regional spatial plan. Beside as the "guidance of future actions" regional spatial plan or RTRW is basically a form of intervention that is done so that human/living creatures' interaction with the environment can be run harmoniously, consistently, balanced for achievement of prosperity for the human/living creatures and the environment continuity and development sustainability.
- 2) Process of space utilization, which is the realization of spatial plan or the implementation of spatial development itself.
- 3) Process of space utilization control which consists of licensing mechanisms and control toward implementation of development to remain in accordance with Municipal Spatial Plan and the purposes of its regional spatial plan.

2.2. Compilation Process of Municipal Spatial Plan and Its Implementation

2.2.1. *Compilation Process of Municipal Spatial Plan*

There are some steps that should be done to produce a Municipal Spatial Plan. The steps of this compilation process can be seen in **Figure 2.2** below.

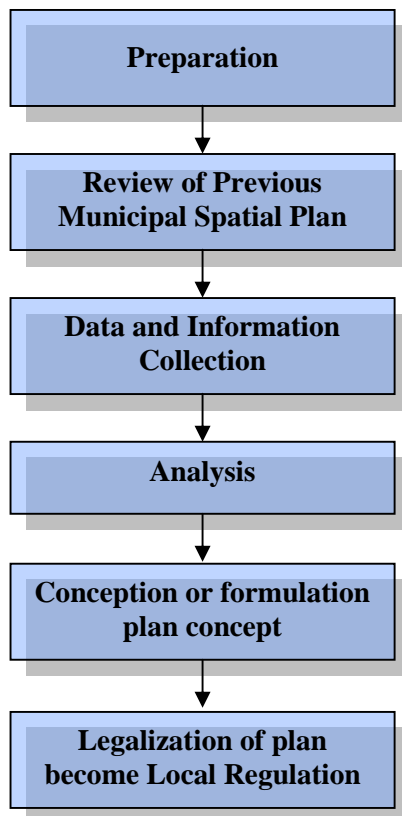


Figure 2.2. Compilation Process of Municipal Spatial Plan.

1. Preparation

Preparation consists of making *Terms of Reference* (TOR); forming an executor team that consists of director team, technical team, and supervision team; preparing administrative completeness; preparing the procurement of consultant services; preparing work programs and a team of experts if it will be carried out by self-management; technical preparation; and estimation of preparation cost of Municipal Spatial Plan compilation.

2. Review of previous Municipal Spatial Plan

Review of previous Municipal Spatial Plan is done by evaluation of previous Municipal Spatial Plan that consists of some aspects; data completeness, methodology that is used, completeness of plan content and plan map, review of plan use, review of controlling, institution, legality aspect, and process of plan compilation.

3. *Data and information collection*

Data and information that are collected here that is data and map of; development policy, social-economy condition, human resources, resources made, natural resources, and land use, data of development financing and data of institution.

4. *Analysis*

Analysis that is done comprises analysis of present condition and trend in the future. Aspects that are analysed are analysis of; policy and strategy of regency or municipality development, regional, economy, human resources, resources made, natural resources, settlement system, land use, development financing, and institution.

5. *Conception or formulation of plan concept*

Formulation of plan concept of Municipal Spatial Plan is begun with identification of development potency and problem at present time and for the future. This identification needs communication between planner and society who will be influenced by plan. Next step is goal formulation of urban space utilization. After that, the next step is formulation of urban spatial strategy and policy.

6. *Legalization of plan become local regulation*

Legalization of plan become local regulation is done by representative. First of all the final concept of Municipal Spatial Plan is presented by making team in front of representative to be discussed as local regulation plan. Furthermore, Municipal Spatial Plan that is revised is stated as local regulation through plenary hearing of representative.

This Municipal Spatial Plan is important to be legalized in local regulation form in order to have strong law power to become reference for related apparatus or institution in giving permit for various activities which will fill urban space.

There are some institutions that involved in compilation process of Municipal Spatial Plan, they are;

1. *Government formal institution*

Institutions that are given main responsibility by Mayor for spatial plan are commonly Regional Development Planning Board, and Public Works Bureau or Spatial Bureau.

2. *Functional institution*

Functional institution is adhoc team that has duty to give direction to party who make the Municipal Spatial Plan. Adhoc team is responsible toward plan substance. This team commonly involves element from government that consists of Regional Development Planning Board, Public Works Bureau or Spatial Bureau, National Land affairs Board (Badan Pertanahan Nasional/BPN), Regional Investment Coordinating Board (Badan Koordinasi Penanaman Modal Daerah/BKPMMD), university, and other related institutions.

3. *Social organization.*

Social organization is also the important organization that should be involved in making process of Municipal Spatial Plan.

Three actors; society, government, and making team who involved in compilation process of Municipal Spatial Plan have interrelationship each other. The mechanism of interrelationship among them can be seen in **Figure 2.3.** below.

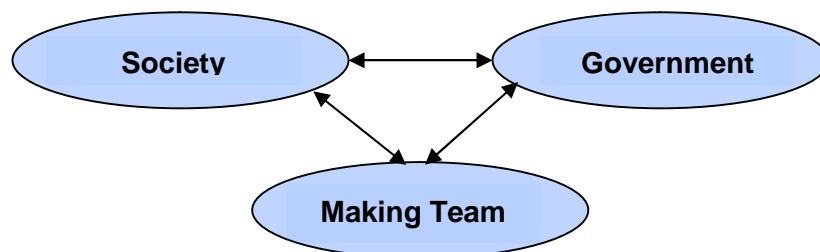


Figure 2. 3 Mechanism of Interrelationship among Society, Government and Making Team.

Society should be involved in all process making from preparation step until enacting step in compilation process of Municipal Spatial Plan.

2.2.2. Implementation of Municipal Spatial Plan

According to Alexander (1985) in Alexander and Faludi (1989) there are many definitions of implementation depend on the level of organisation or government concerned where these definitions will vary relative to it. Implementation in this context refers to action and operations in the field.

Likewise Conyer (1984) also has opinion about definitions of implementation. According to her, definition of implementation is various. It depends on the point of view of the person concerned. She defined implementation of planning to refer to the whole process of translating broad policy goals or objectives into visible results in the form of specific projects or programmes of action.

Based on article 1 paragraph 11 of Law number 26/2007 concerning Spatial Plan, implementation of spatial plan is achievement attempt of spatial plan goals through implementation of spatial planning (*pelaksanaan perencanaan tata ruang*), space utilization (*pemanfaatan ruang*), and control of space utilization (*pengendalian pemanfaatan ruang*).

Implementation of Municipal Spatial Plan is process in between plan and outcome. There are many factors that influence implementation of this Municipal Spatial Plan. According Faludi and Altes (1994), a successful implementation process does not only avoid known pitfalls but seeks better and perhaps unpredictable paths to new and perhaps unforeseen destinations.

Mastop and Faludi (1997) give illustration of plans that the plans are only parts of the information on which decision are taken to be operated. “The consequences of plans are confined within the limits of what planning documents strive to achieve. To what extent planning has effectuated consequences outside of the bounds if its own plan is beyond the limits imposed by complexity” (Talen, 1997, page 580).

2.3. Distortion in Implementation of Municipal Spatial Plan

2.3.1. Distortion

In planning, sometimes it is difficult to separate between distortion and failure. Actually, distortion in planning implementation can not be said as failure in planning, but failure in planning can be said that distortion occurred in planning. There are some meanings of failure in planning. Talen (1997) separates the meaning of failure into two categories: (1) misguided notions about what should planners do, stated either implicitly or explicitly; and (2) failure to implement plans.

Plan evaluation is needed to know whether distortion has occurred or not. There are two forms of plan evaluation; conformance evaluation and performance evaluation. Conformance evaluation is implementation assessment that developed in the early to mid-1970s can be characterised as “linear” (Alexander, 1985, pages 407-408; Faludi, 1987) or ‘top-down’ (Sabatier, 1986) in Alexander and Faludi (1989) page 130. Meanwhile, performance evaluation process is variously described as ‘circular’, ‘reflexive’, or, finally, as a ‘negotiative process’ (Alexander, 1985, pages 408-409). Clearly, such views have implications for implementation assessment: evaluation can no longer simply compare the conformity of the outcomes with the policy or plan. Instead, implementation itself becomes the object of evaluation (Alexander and Faludi, 1989, page 130). Finally, plans cannot be judged solely in terms of conformance between a plan and final outcomes according to performance evaluation (Mastop and Faludi, 1997).

Each of these forms has their own advantages and disadvantages. According to Talen (1997), there are some disadvantages of conformance evaluation or conformance approach, they are;

1. Sometimes, conformance evaluation is to some extent less tenable, particularly when planning activity is considered the same with process.
2. The issues of uncertainty and lack of flexibility must be deal with, if plan success or failure is measured on the basis of plan conformity.

Besides disadvantages there are also advantages of conformance approach. One of disadvantages that ever proposed by Talen:

“The advantages of having at least the possibility of tying objectives to effects and of possessing a more tangible, objective, measure of planning success underscore the merits of attempting to pursue a fuller exploitation of this approach” (Talen, 1997, page 577).

Conformance approach is conventional evaluation approach. This conformance approach asks “to what degree do operational decisions, implementation decisions, and actual outputs, outcomes, and impacts conform to the goals, objectives, intentions, and instructions expressed in the policy, plan, or programme being evaluated?” (Alexander and Faludi, 1989, page 135).

According to Alexander and Faludi (1989), different with conformance approach, conformity is not the only criterion of success for performance approach. In this approach, implementation of the plans which do not conform, in some degree or other, do not automatically emerge a negative evaluation of the plans.

Alexander and Faludi made a model of performance. From their models with “a determinate relationship between intention and outcome” to decision-centred view, they said that so long as plans are of value in operational decision making the connection between implementation of plans and success is not relevant. Furthermore, Fudge and Barret (1981) stated “performance of planning does not presuppose conformance of actions with the original plan” (Faludi and Altes, 1994, page 411).

Additionally, Mastop and Faludi (1997) state even during its implementation, plan might need to be justified anew, re-enacted and perhaps adjusted. So, the basic policy or plan need never be followed blindly, particularly when applied to specific situation. Basically, the performance term refers to how a plan does during its implementation period, how the role of the plan; whether people use it, whether it helps clarifying choices, whether the plan forms part of the definition of subsequent decision situations without unavoidably being followed.

Distinction between conformance and performance is also stated by Barret and Fudge (1981) in Mastop and Faludi (1997, page 820). They define conformance as “concurrence between the original plan and changes in the outside world meanwhile performance has to do with the way in which a strategic plan holds its own during the deliberations which follow its adoption”.

In conclusion, based on conformance approach if there is distortion along implementation of a plan it means fail but based on performance approach, distortion in implementation of a plan does not always mean fail.

2.3.2. Factors that cause distortion

The growth and change of society and environment occurred dynamically. This situation becomes one of reason why distortion in implementation Municipal Spatial Plan occurred. Government or actors who have responsibility on spatial plan perform distort from the plan because there are some considerations along implementation period that should be considered.

According to Balbo (1993), there are some factors that cause distortion in implementation of spatial plan. One of these factors is the plan is considered too late to anticipate development that occurred as consequence of plan that is compiled usually in middle term and long term meanwhile changes can be happened every time.

There are some changes along implementation of spatial planning that is intrinsic to human and social conditions. Changes that could not be anticipated in implementation of spatial planning cause distortion. The power of anticipation is limited by uncertainty when the spatial planning was made. “Uncertainties include uncertainty about the decision environment: what are future trends going to be?; uncertainty about goals: for what values (our own and those of future ‘consumers’ of our plans’ results) should we plan?; and uncertainty about related areas of choices: what decisions and choices are going to be made in areas related to the subject of current policy or planning efforts, for example, national economic policy, pending environmental legislation, etc?” (Friend and Jessop, 1977; Hall, 1980 in Alexander and Faludi 1989, page 129).

Distortion occurred because based on the fact that during the implementation process the meanings of plans are continually renegotiated. According to Talen (1997), there is an assumption that the goals of planning are noble but planning fails to implement these goals because of factors beyond its control. He gives an example of these factors are political and economic constraints where worth-while plans may fail to be implemented because of these constraints. In this research this condition is said distortion occurred.

Based on Directorate General of Spatial (2003), spatial plan still has some problem that makes this spatial plan product has not functioned properly in its implementation. There are some factors that cause spatial plan product can not be implemented properly, they are;

- There are some fundamental changes of spatial plan policy.
- Its compilation process is not involving all components of development actors.
- Lack of understanding of spatial plan user in interpreting spatial plan into development programs.
- Municipal Spatial Plan product has not been legalized to become a regulatory binding for all development actors.
- Municipal Spatial Plan product that less qualified.

Failure in planning can cause distortion in its implementation. So, factors that cause failure in planning indirectly also can cause distortion in planning. There are three factors that Talen (1997) state as cause failure in planning. The factors can be delineated as follows: (1) political complexities and lack of societal consensus; (2) uncertainty and lack of available knowledge (related to lack of data, for example); and (3) lack of support for planning in terms of level of funding and level of community support. Society or community as recipient has significant role in planning. Mastop and Faludi (1997) have opinion that recipients have a role to play in the assessment of whether a plan is reasonable, whether it is relevant to their situation.

Furthermore, Talen (1997) concludes some experts' ideas that distortion is also caused by too many other forces at work, too many forces beyond local planning control for planning to hope in order to achieve its stated goals, lack of funding, and weak local commitment.

Based on public discussion by Chay Asdak (2006), generally, lack of understanding among actors is one of prominent problem in implementation of Municipal Spatial Plan where lack of understanding and lack of agreement all development actors to substance of the Municipal Spatial Plan. Lack of understanding because this Municipal Spatial Plan is still in policy statement form that has not been detailed yet into operational implementing regulations for instance zoning regulation, detail urban spatial plan (Rencana Detail Tata Ruang Kota/RDTRK)/ urban spatial plan (Rencana Teknik Ruang Kawasan/RTRK)/ building and environment plan (Rencana Teknik Bangunan dan Lingkungan/RTBL). Although this agreement politically has been shown by local regulation about spatial plan but there are some parties who try to find way to not follow direction in Municipal Spatial Plan. One of factors that caused this is lack of participative in making process of the spatial plan. This problem becomes potential factor that cause distortion in implementation of spatial plan.

Besides lack of understanding and lack of agreement of all development actors, inconsistency of government toward regulations also becomes important problem for example by revising existing local regulation about spatial planning by government. Change in regulation causes change to land use map. This situation is exacerbated by high population growth particularly because of urbanization and the decreasing of carrying capacity of environment and social that can not counterbalance need because of population pressure.

Problem in implementation of Municipal Spatial Plan is also caused by weakness of law enforcement and low responsibility of all actors. Low awareness of society toward spatial plan is also one of problems.

2.3.3. How to cope with factors that cause distortion

The growth and change of society and environment occurred dynamically, likewise knowledge and technology also developed over time. Therefore, based on Law number 26/2007 concerning Spatial Planning, in order to make Municipal Spatial Plan that has been made is in accordance with development demand and situation change, Municipal Spatial Plan can be reviewed or enhanced periodically.

Review of Municipal Spatial Plan conducted in accordance with the development demand and the development of urban areas and conducted periodically as needed. Review of Municipal Spatial Plan includes monitoring activity and study activity.

Review and improvement of Municipal Spatial Plan is a process that is done periodically in order always to have a spatial plan which functions as stipulated in the Law number 24/1992 concerning Spatial Planning or Law number 26/2007. Review is part of "spatial planning" as a process to improve the spatial plan which has been there. Its position is after the Municipal Spatial Plan has been done or during its implementation.

Factors that determine review activity of Municipal Spatial Plan is a critical activity to be done periodically. This activity is done in the spatial plan process due to a change or a distortion or a mismatch between the plans and the fact that occur in the field.

Review is conducted through several phases, namely: 1) Evaluation of data and information from the activity results of the space utilization and controlling of space utilization; 2) Determining whether review is needed or not; 3) Review activities such as analysis, observation, study and evaluation or assessment; 4) Improvement activities of Municipal Spatial Plan; 5) Utilization stabilization and utilization control of spatial plan; 6) Setting up the things that are associated with the legitimacy on legal materials of the Spatial Plan review. Alexander (1981) also suggests some criteria for evaluating plans and planning processes. These criteria are still focused on implementation, but they link the quality of planning and plan to the optimality of the strategies that were devised.

Based on article 35, Law number 26/2007 concerning Spatial Planning, control of the space is done through zoning regulations, permit, giving incentive and disincentive, and sanctions. Hopefully, factors that cause distortion can be minimized by this space control. Actually, these factors should be avoided in order to actualize effective planning but not all them, only the factors that cause negative distortion because like what Mastop and Faludi (1997) state deviates or departures from a planning statement do not exactly mean failure and deviates are perfectly normal phenomena which we must learn to live with.

2.4. The Role of a Municipal Spatial Plan

It is not enough only by comparing the original plan with its outcome to determine whether a Municipal Spatial Plan still has the role or not. Mastop and Faludi (1997) state that the main concern is not whether the plan is followed or not, but whether the plan plays a role in decision situations in which it was meant to be used.

Although from conformance view in implementation of a spatial planning distortion often occurred, but as Mastop and Faludi (1997) have a notion as long as the plan being used as a frame of reference, it does not matter with conforming or nonconforming results, it means that the plan performs.

Furthermore, Friedman in Faludi and Altes (1994, page 405) see “a good plan as “a drifting cloud”. It is not inviolable, like the Holy Scripture, but a fleeting summary of current knowledge, expectations and goals”.

2.5. Concluding Remarks

This chapter mainly discusses basic theory of spatial planning particularly Municipal Spatial Plan. There are four main parts which are described; spatial planning, process of its compilation and implementation, distortion that could be occurred along implementation period, and also the role of Municipal Spatial Plan.

In the first part, it explores basic theory of spatial planning. There are some definitions of planning that are described to remind and refresh definition of planning as fundamental in this research. It is continued by definition of Municipal Spatial Plan. Furthermore, it describes definition of spatial planning in Indonesia in general as basic understanding to analyse Municipal Spatial Plan of Padang Panjang Municipality as case study in this research.

In the second part, it describes compilation process of Municipal Spatial Plan and its implementation. There are some steps that should be done to produce a Municipal Spatial Plan and there are some institutions that involved in compilation process of Municipal Spatial Plan.

The third part describes distortion in implementation of spatial plan. Distortion is something that emerges during the implementation of plan. Positive or negative of this distortion also depends on approach that is used. In this research, there are two approaches that are proposed, they are; conformance approach and performance approach. Conformance only considers plan and its outcome meanwhile performance considers more about implementation process. This part describes that there are many factors cause distortion in implementation Municipal Spatial Plan.

This chapter also slightly gives understanding about the role of a Municipal Spatial Plan. Next chapter will describe more about Municipal Spatial Plan in Padang Panjang Municipality as study area of this research.

Chapter 3

Municipal Spatial Plan in Padang Panjang Municipality

This chapter describes profile or overview of Padang Panjang Municipality as study area of this research. It also describes how municipal spatial plan was made in this municipality and how it had been implemented.

Profile of Padang Panjang Municipality is very important to be described in order to give picture of general condition of this research area that influences implementation of its Municipal Spatial Plan. So, with this part hopefully can give general condition of this study area that relates to research topic. Meanwhile, how Municipal Spatial Plan of Padang Panjang Municipality was made will give explanation how exactly this plan was made, what are the steps to compile this plan, in which step the distortion can emerge and how the implementation of this plan so that the distortion can be occurred. Finally, this chapter is very useful and supports analysis in next chapter.

3.1. Profile of Padang Panjang Municipality

Some aspects that will be described which have relationship with this research are condition of geography, demography, governance, economy, education, politics, and social of Padang Panjang Municipality where these conditions very influenced implementation of this plan.

3.1.1. Geography

Padang Panjang is a small city in West Sumatera Province with area 2.300 Ha or around 0,05% from West Sumatera area. Geographically, Padang Panjang is located between 100°20' – 100°30' longitude East and 0°27' – 0°32' parallel South. The map of Padang Panjang can be seen in **Figure 3.1.** below.

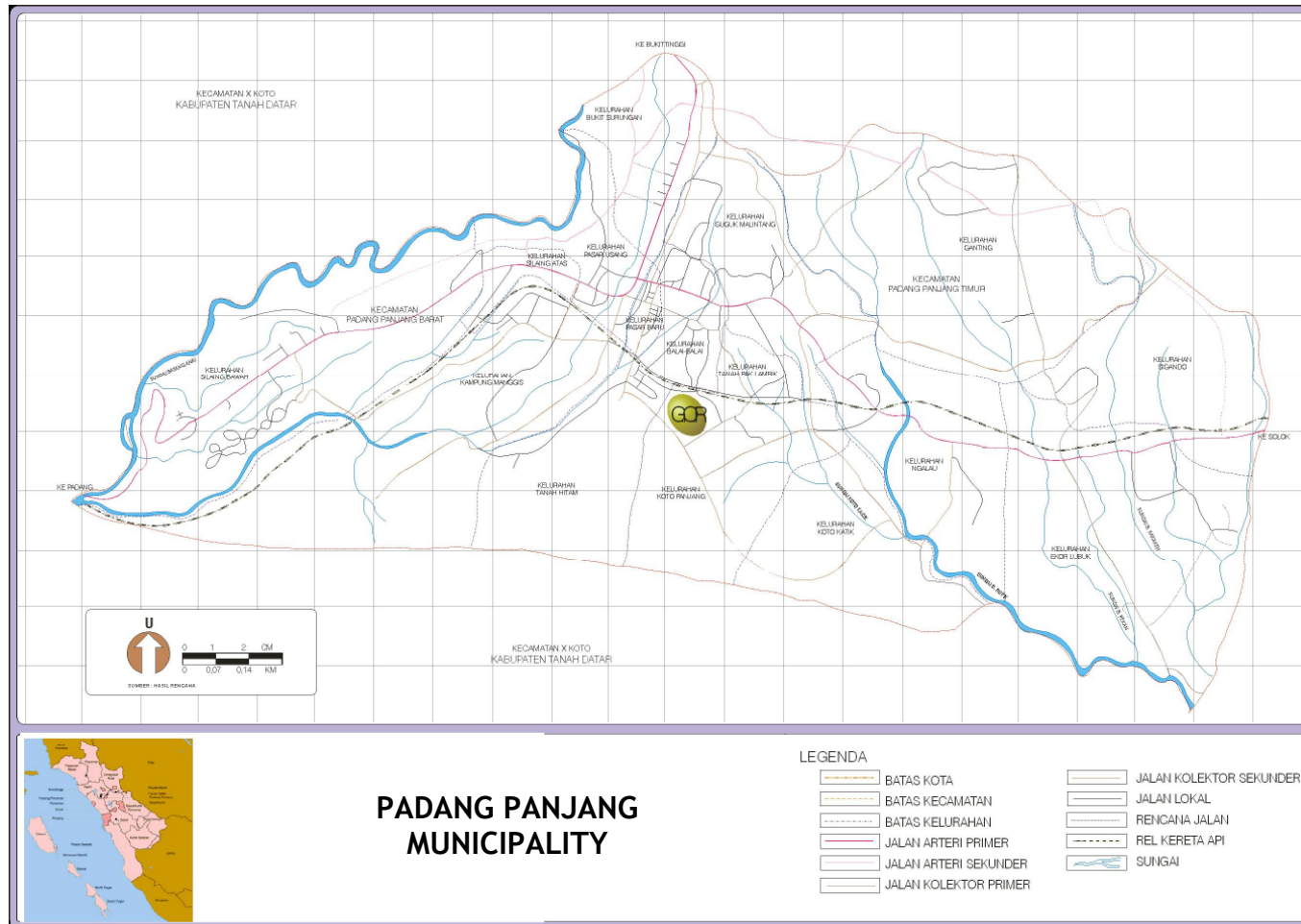


Figure 3.1. Map of Padang Panjang Municipality.

Padang Panjang has bumpy morphology of land surface and steep slope with elevation between 650 - 850 meters above sea level or around 773 meter above sea level. From its area 2.300 Ha, only 464 Ha (20,17%) that can be developed effectively while the rest 1.836 Ha (79,83%) is the steep land with slope more than 16%.

3.1.2. Demography

Padang Panjang Municipality is one of cities with population growth included in slow population growth. Growth rate along period of 1980-1990 and 1990-2000 had showed tendency that relatively low. The growth rate was 0,9% until 1,2% in average but population growth in Padang Panjang had increased significantly along 2000-2005 period. The main cause was migration from outside Padang Panjang particularly school age people.

Analysis of population composition in Padang Panjang municipality is interesting if it is seen from age group as shown in **Table 3.1.** below. From this table we can see that there is significant number of age group of 5 until 19 years old. The high of this number is caused there are many children or people around Padang Panjang Municipality study in Padang Panjang Municipality (Status of Regional Environment/ Status Lingkungan Hidup Daerah SLHD, 2008).

Table 3.1.
Population of Padang Panjang Municipality Based on Age Group
1999-2004

No.	Age Group	Y E A R					
		1999	2000	2001	2002	2003	2004
1.	0 – 4	4.215	4.356	4.537	4.505	4.528	5.508
2.	5 – 19	13.970	13.279	14.733	13.847	13.319	14.227
3.	20 – 59	18.591	19.051	18.242	19.100	21.163	21.697
4.	> 59	3.298	3.483	2.954	3.492	3.807	3.267
	Total	40.074	40.169	40.466	40.944	42.817	44.699

Source : - Padang in Figures 1999-2004
 - Basic Data of Regional Profile of Padang Panjang Municipality 2001-2005.
 - Analysis Result.

3.1.3. Governance

During implementation period of Municipal Spatial Plan 1994-2004, governance in Padang Panjang Municipality had undergone two types of governance. From 1994 until 2001, type of governance in Padang Panjang Municipality is still centralization. Centralization is centralizing all authorities for all affairs concerning governance to central level where in this era, regional development planning of Padang Panjang Municipality only as support for implementing of national policy and planning. From 2001 until now, type of governance in Padang Panjang Municipality has shifted into decentralization or it is known as autonomy era. Decentralization is giving authority from central government to governance organization in region to execute local interest. Based on Law number 5/1974, decentralization is giving governance affair from central to local. Giving authority to local government is in order to reach efficient governance. So, because of that all initiative, authority, and responsibility about politic and its implementation, planning and its implementation, and also its financing become responsibility of Padang Panjang Municipality itself in this period of time.

Because of the shift, governance in Padang Panjang Municipality changed in some parts after 2001, for example the election of mayor as leader in this municipality was done directly by its citizen. In doing his work, mayor is assisted by some institution. There are some institutions in Padang Panjang Municipality that have relationship with spatial plan or development planning, they are; Regional Planning Board as leading sector of spatial plan, Public Works Bureau particularly Spatial Plan Division and so forth.

Through a better autonomy implementation makes role of local government and society will become bigger in direction decision and local development management. Initiative, idea and control from society can be absorbed optimally so development activity can be directed based on society's desire and aspiration. Based on this way, rejection and negative reaction from society can be minimized. This condition also will emerge responsibility of society toward development activity of Padang Panjang Municipality. Nevertheless, the implementation of local autonomy still is not perfect yet.

3.1.4. Economy

There are two sectors of economic activities in Padang Panjang Municipality that were observed in evaluation of a municipal spatial plan; as follow:

1. Industrial sector

There are two types of industry in Padang Panjang, they are; small industry and medium industry in which the dominant industry in Padang Panjang is home industry. Generally, the growth of industrial sector in Padang Panjang along 1994-2004 had not been significant enough. Meanwhile until now Padang Panjang still has not had large scale industry yet.

2. Trade/commerce sector.

Strategic location of Padang Panjang gives positive impacts on its economic sector, particularly on trade/commerce sector. Padang Panjang is located on regional trajectory among some cities. Padang Panjang is an interregional trade centre for vegetable and horticulture trading.

During period 1994-1998 the number of commerce business unit in Padang Panjang had increased 5,03%.

Not only positive impacts, but strategic location of Padang Panjang also gives negative impacts for example because of strategic location as regional vegetable commerce centre and located among cities around it causes land conversion tends to increase and becomes one of threats to environment. So, it is very important to tighten land use pattern based on Municipal Spatial Plan in order to keep environment.

3.1.5. Education

Education sector in Padang Panjang Municipality always increases year by year. It can be seen from *Gross Enrolment Ratio of Primary School* (GER). GER is number of student based on its education level divided by number of population who has the same age with the suitable education level. This indicator is used to know how high school participation of resident on each education level.

The *Gross Enrolment Ratio of Primary School (GER)* in Padang Panjang Municipality can be seen on **Table 3.2.** below.

Table 3.2.
Gross Ratio of Primary School (GER)
Based on Education Level in 2002

No.	Education Level	GER (%)
1.	Primary School	113,28
2.	Junior High School	205,11
3.	Senior High School	234,41

Source : Education Bureau, Statistics of Padang Panjang Municipality or BPS (Biro Pusat Statistik), Padang Panjang in Figure 2002.

From table above we can see that GER is very high, even more than 100%. It means that the number of children study in Padang Panjang Municipality is more than population number of population in school age on suitable education level. So, from this data we know that there are many students outside Padang Panjang also study in Padang Panjang Municipality. One of the reasons is education quality in Padang Panjang municipality for in level of West Sumatera is good enough.

In 2001, local government of Padang Panjang Municipality made Basic Pattern of Development of Padang Panjang Municipality for 2001 until 2005. One of development visions in this document specified that education is development vision as a fundament for society development. Consequently, local government of Padang Panjang Municipality had to make some strategies to improve education sector not only its quality but also its quantity at that time.

3.1.6. Politics

Politics influences implementation of Municipal Spatial Plan in Padang Panjang Municipality very much. Two important actors who have important role are; first, Mayor as executive, and second, Representative as legislative.

Mayor is a person who holds determinant power. He decides how the spatial plan would look like, particularly in autonomy era. A simple example is in giving development permit. After the proposal proposed by someone is processed by spatial plan division in Public Works Bureau, it will be determined by the Mayor.

In autonomy era, local government of Padang Panjang Municipality try to do every effort to find and increase its income or regional original income or PAD (Pendapatan Asli Daerah). In this era, development planning in Padang Panjang is more development oriented. Because of that, local government of Padang Panjang Municipality is easily tempted with proposal which is proposed by investors in order to get benefit. In this period, there are many investors take advantage by using political power to make their proposal is achieved. There is often political game such as lobbying among actors who involve in development planning in order to achieve their goal particularly between investors and Mayor. One side, this situation potentially causes distortion in implementing municipal spatial plan but on the other hand with some considerations this situation can give benefit to Padang Panjang Municipality to increase the original income.

Although after 2001 the type of governance is decentralization or autonomy but there is still influence from central government for instance there are some policies that central government enacted and influenced local condition indirectly even directly. Politic dimension in Padang Panjang can be seen from development of politic party apparatus functions since where governance structure has changed to become decentralization, democratic election also has been done.

3.1.7. Social

Society in Padang Panjang Municipality is dominated by native people that have their own culture. This society has an important influence in development planning because they have '*tanah kaum*' that the ownership problem becomes a challenge for government to manage because this land is owned by group of people. There is no certificate for this land and even for the obsolete culture this land is not allowed to be sold.

Furthermore, besides give challenge for local government, the society also has common tradition as important value that can be one of culture capital to develop Padang Panjang in the future. One of these cultures is decision making based on consensus. Consensus is one of inherent custom in this society. So, hopefully it is not difficult for local government to involve society in planning process.

3.2. Municipal Spatial Plan in Padang Panjang Municipality

3.2.1. How the Municipal Spatial Plan was made

Padang Panjang Municipality has some potency that can be developed or expanded to increase its development, for instance strategic location, nature condition, and education quality. On the other hand, Padang Panjang Municipality will also have some problems, for instance decreasing of environment quality. The potency and problem should be managed by involving society or community and government. Based on potency and problem that is faced by development plan of Padang Panjang so it is important to make Municipal Spatial Plan of Padang Panjang Municipality.

Municipal Spatial Plan of Padang Panjang Municipality is an important document that becomes policy direction of development implementation and a reference for more operational plan preparation in Padang Panjang Municipality. This document is a product of the spatial planning activities and part of the spatial. However, in Municipal Spatial Plan not only there is spatial plan, but also utilization of the spatial, control of spatial, and the rights, obligations and the participation of community. This document is a guide for preparation of development basic policy and utilization of space, directive of investment location, preparation of detail urban spatial plan (Rencana Detail Tata Ruang Kota/RDTRK)/ urban spatial plan (Rencana Teknik Ruang Kawasan/RTRK)/ building and environment plan (Rencana Teknik Bangunan dan Lingkungan/RTBL) and other technical plans, permit publishing, development implementation, preparation of development program indication.

Municipal Spatial Plan of Padang Panjang Municipality 1994-2004 was made in 1994 and enacted in 1998 by Local Regulation number 14. Based on this regulation article 8, time period of this Municipal Spatial Plan is for ten years.

Items in Municipal Spatial Plan of Padang Panjang Municipality comprise of evaluation of previous spatial plan, directives and policy, and analysis of spatial plan in order to reach the goals of Padang Panjang development.

There are some important aspects analysed in making Municipal Spatial Plan of Padang Panjang Municipality, they are;

- *Analysis of carrying capacity*

Analysis of carrying capacity consists of;

1) Land capability and availability analysis.

Based on basic physical analysis, factor that influences land capability in planned area is topography factor.

Area that has slope 0-8% is area that can be developed as urban area and its land capability is high, meanwhile area with slope 8-15% is area that is not appropriate enough for urban development. It has middle land capability. Area with slope more than 15% is not appropriate for urban development and its land capability is very low.

So, land capability that is appropriate for urban development is area that has slope between 0 until 15% and based on analysis of slope map, land use map and suitability map of Padang Panjang that ever been done where in planned area only 464 Ha.

2) Land capacity analysis.

Land capacity is capability of land to accommodate population in planned area in order to make population placement in this area optimal.

3) Analysis of physical growth trend and land use.

Commonly, population growth and economic activities growth require land need, because of that physical growth and land use trends analysis is needed.

- *Population analysis*

Analysis of population factor is very important stage in urban planning process particularly in making process of Municipal Spatial Plan. Population factors that are analysed comprise number of population and population growth, distribution and population density, population based on age level and gender, and population based on labour force.

Population growth average of Padang Panjang Municipality is 1,14% per year (based on census) but based on data processing from 1994 until 1999 had been seen average population 0,99% where in 1994 and 1996 decreased -0,10% and in 1997, 1998, 1999 increased 5,04%. This increasing number occurred because natural population growth (birth rate and death rate) and also population migration from outside Padang Panjang.

Population growth of Padang Panjang Municipality had been increased from 0,29% per year in making process analysis of general plan of urban spatial plan (Rencana Umum Tata Ruang Kota/RUTRK) 1985-2004 became 0,99% per year.

- *Analysis of facility needed*

Analysis of facility needed of Padang Panjang Municipality is adjusted with existing condition and characteristic of facility in Padang Panjang. It will be estimated the need of facility for the future based on estimation of population growth, urban function, and activity pattern of Padang Panjang Municipality.

- *Analysis of urban utility*

Analysis of urban utility really depends on urban and population growth. If urban and population growth increases so the need for urban utility also increases, not only in quality but also in quantity.

In general, making process of Municipal Spatial Plan of Padang Panjang is the same with what has been described in **Chapter 2** about making process of Municipal Spatial Plan which its making process based on Law number 24/92 and 26/2007 concerning Spatial Planning. On the other hand, its realization still far from what should be done, for instance; it has not thoroughly involved society yet.

Actually, there are some actors who involved in this making process, they are; local government, representative and society representative (leader of custom and society organisation). Unfortunately, stakeholders' involvement in compilation process of Municipal Spatial Plan still uses old paradigm between government and consultant of planning. Bureau or related institutions only involved in giving data and input as member of technical team, meanwhile the others involved in result analysis which has been compiled by consultant.

3.2.2. Implementation of Municipal Spatial Plan of Padang Panjang

Implementation of Municipal Spatial Plan of Padang Panjang Municipality along period 1994-2004 had really been influenced by situation and condition in Padang Panjang along that period of time.

General condition of space utilization in Padang Panjang still becomes one of problem in Padang Panjang because it has not appropriated yet with Municipal Spatial Plan. It is because area of Padang Panjang that only 2.300 Ha meanwhile the effective and relatively flat with slope 0% - 15% only 464 Ha or around 20,17% from all area of Padang Panjang.

Padang Panjang Municipality ever evaluated implementation of Municipal Spatial Plan 1994-2004 in 2001 because there were so many changes along this period. During this period there were many internal and external factors that influenced implementation of this Municipal Spatial Plan. Evaluation that was done only used conformance approach to determine the distortion directly that had been occurred by comparing plan and outcome in evaluation year.

3.3. Concluding Remarks

The first part of this chapter has described condition of geography, demography, governance, economy, education, politics, and social as general picture of Padang Panjang Municipality in 1994 until 2004. All of the conditions really influenced implementation of Municipal Spatial Plan at that time. As for instance, the change in governance system of Padang Panjang Municipality from centralization into decentralization system in 2001 gave significant influence in

implementation of this Municipal Spatial Plan. The implementation of Municipal Spatial Plan in this municipality has still been influenced and motorized by central government from 1994 until 2001, but Padang Panjang more independent to manage and implement its own spatial planning after 2001 or in autonomy era. Consequently, spatial planning of Padang Panjang Municipality more development oriented than defensive oriented in autonomy era in order to increase its local income.

Subsequently, the second part has described how Municipal Spatial Plan was compiled or made in Padang Panjang Municipality where there are some stages that should be followed and there are some important aspects that were analysed in making this spatial plan. From these stages and aspects we may know that distortion very possible to be occurred during this spatial plan was made and during its implementation.

Shortly, this chapter gives basic information about why distortion in implementation of municipal spatial plan can be occurred. Later, how this condition of Padang Panjang Municipality and the way the Municipal Spatial Plan was made influenced the implementation of Municipal Spatial Plan even emerged distortion will be described further in **Chapter 4**.

Chapter 4

Data Processing and Analysis

This chapter consists of two main parts, they are; data processing and data analysis. Data processing aims to show distortion value in percentage by using conformance view in order to make sure that the distortion had occurred in implementing a spatial planning where in this research particularly Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*) of Padang Panjang Municipality 1994-2004. Data analysis aims to explain type of the distortion based on conformance and performance view, and what factors that caused this distortion. Finally, at the end of this chapter we know to what extent the role of Municipal Spatial Plan of Padang Panjang Municipality 1994-2004 is.

There are five main components that are usually discussed in the document of Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*) and then evaluated, they are; 1) Structure of space utilization, 2) Main structure of service level, 3) Main system of transportation, 4) System of utility network, and 5) Institution. This research only discusses or evaluate about structure of space utilization.

Evaluation of structure of space utilization consists of four sectors that really have relationship with structure plan or spatial development, they are;

1. Settlement Area
2. Industrial Area
3. Service Facility Area. It consists of; a) Education Facility, b) Prayer House Facility, c) Hospital and Health Infrastructure, d) Economic Facility, and e) Commercial Area.
4. Utility Service Area. It consists of; a) Electricity, b) Clean Water, and c) Telephone/communication.

From structure of space utilization above, settlement area and education facility are chosen to representative this research because these two sectors are very significant in Padang Panjang Municipality³. So, by choosing these sectors hopefully will give more explanation and understanding about process of spatial plan that had been done in Padang Panjang Municipality.

4.1. Data Processing

Data processing will use conformance view in order to show distortion value in percentage. Mastop and Faludi (1997) state that before discussing the level of performance, we have to determine whether there has been conformance or not. This data processing is important in order to prove that the distortion had occurred in implementing a spatial planning where in this research particularly Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*) of Padang Panjang Municipality.

There are some steps that should be done to know how big distortion had occurred along period of implementation process of Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*). First step is by gathering data from Municipal Spatial Plan document and data of development practice. Data of development practice can be derived from some institutions and also from *Padang Panjang in Figures* document. Second step, data in spatial plan document with data in realisation of development practice is compared.

Plans cannot be judged solely in terms of conformance between a plan and final outcomes (Mastop and Faludi, 1997) because of that, all of steps above are only aimed to know how big distortion value is, that had occurred along period of implementation process in order to analyse factors that cause this distortion in performance step. The aim of these steps is not to judge this plan fail or success.

The distortion value for settlement area and education facility can be seen below.

³ Settlement area closely related to the use of land where land scarcity is one of big issues in Padang Panjang Municipality. Development vision that was proposed in Basic Pattern of Development of Padang Panjang Municipality 2001 – 2005 specified that education as a basic for society development.

1. *Settlement area*

There are some data that are needed to analyse how big distortion in settlement area sector that had occurred since 1994 until 2004 in Padang Panjang Municipality. The data are;

- Planning for settlement area in Spatial Planning document 1994-2004. Its mean how big area that had been planned for settlement area until the end of 2004. This data is derived from Municipal Spatial Plan Document of Padang Panjang Municipality 1994-2004 or from Executive Summary of Spatial Planning Evaluation of Padang Panjang Municipality 2001.
- It is also added with map of land suitability for settlement area and map of realisation in 2003 to show the distortion that was occurred based on settlement area location.
- Realisation of development practice for settlement area until 2004. Its mean how big area that had been used for settlement area in real condition. This data is derived from Public Work Bureau of Padang Panjang Municipality particularly from Housing and Settlement Sub Division of Cipta Karya that is authorised and has responsibility to fulfil the development need of housing and settlement. This data also available in Regional Planning Board of Padang Panjang Municipality.

From data sources above, it can be derived data as below;

- Planning for settlement area for 1994 until 2004 : 217,809 Ha.
- Realisation or development practice of settlement area until 2004 : 334,30 Ha.

From these data, it can be derived;

$$\text{Distortion} = (334,30 - 217,809)/217,809 \times 100\% = \mathbf{53,48\%}$$

This distortion value seems high enough but if we analyse the data of housing and settlement area for some years before 2004 we know that this value really makes sense because some years before 2004 this distortion had had occurred, for instance in 1998 this distortion had occurred. The explanation can be seen from **Table 4.1.** below.

Table 4.1
Housing and Settlement Area in 1998 and 1999

No.	Years	Housing and Settlement Area (Ha)
1.	1998	225
2.	1999	329

*Source : Statistics of Padang Panjang Municipality
or BPS (Biro Pusat Statistik) 1995-1999.*

From table above we can see in 1998 the distortion had occurred where 225 Ha areas was developed for housing and settlement meanwhile the area that was planned for housing and settlement only 217,809 Ha for 1994 until 2004. So, it can be said that the distortion had occurred in the middle of plan implementing.

2. Education Facility

Distortion value that occurred for education facility is seen from number of school building by comparing number of school in spatial planning document with number of school in realisation of development practice in 2004.

Data that are needed;

- Population number in 2004 where population number at that time is 44.699 persons. This data is derived from *Padang Panjang in Figures 2004*.
- Number of schools that were planned for period 1994 until 2004. This data are derived from Municipal Spatial Plan of Padang Panjang Municipality or from Executive Summary of Spatial Planning Evaluation of Padang Panjang Municipality 2001.
- Number of schools in 2004. This data are derived from *Padang Panjang in Figures 2004* and analysis.
- Minimum standard for number of school. This standard is derived from Decree of Ministry of Public Work No.534/KPTS/M/2001 concerning Guidance of Determination of Minimum Service Standard (public service code) in Spatial Structuring, Housing and Settlement, and Public Work.

The data that are derived can be seen in table below.

Table 4.2
Number of School in Padang Panjang Municipality

No.	School Level	Planned Number *)	Real Number in 2004 **)	Minimum Standard	Number based on Minimum Standard
(1)	(2)	(3)	(4)	(5)	(6) = (5)*44.699
1.	Kindergarten	41	13	1/1000 persons	44 – 45
2.	Elementary School	27	40	1/6000 persons	7
3.	Junior High School	9	15	1/25000 persons	2
4.	Senior High School	9	20	1/30000 persons	1 – 2

Source: - *) : *Municipal Spatial Plan of Padang Panjang Municipality (1994-2004)*
 - **) : *Padang Panjang in Figures 2004*
 - *Decree of Ministry of Public Work No.534/KPTS/M/2001 concerning Guidance of Determination of Minimum Service Standard in Spatial Structuring, Housing and Settlement, and Public Work.*
 - *Analysis result.*

From data above, it is derived distortion value for each level of school;

1. Kindergarten

$$\text{Distortion} = (41 - 13)/41 \times 100\% = \mathbf{68,29\%}$$

2. Elementary School

$$\text{Distortion} = (40 - 27)/27 \times 100\% = \mathbf{48,15\%}$$

3. Junior High School

$$\text{Distortion} = (15 - 9)/9 \times 100\% = \mathbf{66,67\%}$$

4. Senior High School

$$\text{Distortion} = (20 - 9)/9 \times 100\% = \mathbf{122,22\%}$$

From data processing above, we get distortion values from where we know that spatial planning in Padang Panjang Municipality in year 1994-2004 had occurred distortion but it does not always have negative meaning. Mastop and Faludi (1997) state that lack of conformance between a plan and final outcomes do not mean poor performance. For more reasons and explanations are provided in data analysis part below.

4.2. Data Analysis

4.2.1. Type of Distortion

The term of distortion in implementing a spatial planning not always has negative meaning but also positive meaning. It depends from which view this distortion is analysed.

The distortion type of one spatial planning can be analysed from two views, from conformance view and from performance view. Conformance view analyses on a planning implementation that is by comparing between plan and outcomes. Planning is not successful if there is anything less than total conformity (Wildavsky, 1973 in Alexander and Faludi, 1989, page 128). Analysis of conformance view seems to be very strict meanwhile analysis of performance view observes planning process not only comparison between planning and its outcome but the important thing is the process between them. Because of this, processes of measurement may need to be flexible enough to recognise the irrationality of processes, people, and output - factors that relate to how information is gathered, interpreted, and subsequently used by decision makers (Carmona and Sieh, 2008, page 3). "Evaluation can no longer simply compare the conformity of the outcomes with the policy or plan. Instead, implementation itself becomes the object of evaluation" (Alexander and Faludi, 1989, page 130).

Conformance approach is conventional evaluation approach. This conformance approach asks "to what degree do operational decisions, implementation decisions, and actual outputs, outcomes, and impacts conform to the goals, objectives, intentions, and instructions expressed in the policy, plan, or programme being evaluated?" (Alexander and Faludi, 1989, page 135). According to Alexander and Faludi (1989), different with conformance approach, conformity is not the only criterion of success for performance approach. In this approach, implementation of the plans which do not conform, in some degree or other, do not automatically emerge a negative evaluation of the plans.

Because of that, based on analysis from conformance and performance view, distortion that had occurred along implementation of spatial plan not always has negative meaning. Likely this distortion is positive meaning based on performance view analysis.

1. Settlement Area

The type of distortion that was occurred in development of settlement area can be analysed from two views:

1. From conformance view, surely this distortion is negative distortion because the outcomes are not the same with what had been planned before. Shortly, between plan and outcome is different. Negative distortion also can be seen from location side where some locations of development of settlement area were not in location that are suitable for settlement and were specified before in Municipal Spatial Plan document. Commonly, these settlements are settlements or housings that were built by individual with or without development permit.
2. From performance view, the distortion that had occurred is positive distortion or has not negative distortion yet because settlement area that has developed in 2004 is still lower than total suitable area for settlement where area that has specified for settlement area in Padang Panjang Municipality is 421,61 Ha, meanwhile realisation of development area is 334,30 Ha. Likewise, from location side could be positive distortion. It depends on the reasons that will discuss afterward in the next part.

Shortly, in one side this distortion is negative distortion if we analyse from conformance view but one side it could be positive distortion if we analyse from performance view.

2. Education Facility

From **Table 4.2.** above, it can be seen that a number of planned school is quite different with a number of school in development practice or real number in 2004. This makes distortion value more significant. Negative or positive of this distortion can be analysed as follow;

a. Conformance Analysis

By using conformance analysis, all these types of school had had negative distortion because the number of school which were planned is different with the number of school in outcome or in the end of planning period.

Additionally, particularly for kindergarten where the number of kindergarten that was planned in 1994 was 41 schools and the real number in 2004 was 13 schools. It resulted distortion 68,29%. Based on minimum standard for number of school that is specified in Decree of Ministry of Public Work No.534/KPTS/M/2001 concerning Guidance of Determination of Minimum Service Standard in Spatial Structuring, Housing and Settlement, and Public Work, the number of kindergarten for 44.699 populations is 44 or 45 schools. Based on this standard, it can be said that negative distortion had occurred in this case because the number of kindergarten in 2004 is very far from the number that is needed for exist population.

Negative distortion also can be seen if we analyse from location side where some locations of development of education facility especially school buildings were not in location that are suitable for education area and were specified before in Municipal Spatial Plan document.

b. Performance Analysis

1. Kindergarten

When estimation was made in 1994, planner made assumption that all children in age 5-6 years old are enter this school. But if we observe situation along 1994 until 2004 apparently there has no policy particularly from Education Department that makes kindergarten compulsory for children before continuing their study to elementary school. So, in this case there were many parents directly sent their children to elementary school without entering kindergarten before. Based on this situation, government did not build kindergarten as many as specified in planning before, where in planning 1994 government made the need of kindergarten school based on assumption that all children in age 5 – 6 years old will enter kindergarten before entering elementary school. Government just built the school based on the actual need each year. In connection with this, the distortion that was occurred can be classified as positive distortion because government do what circumstance need at that time. If

government built kindergarten school as many as specified in the planning, so it would be superfluous.

Based on *Padang Panjang in Figures 2004*, the number of kindergarten student in 2004 is 882 children meanwhile the number of children in age 5-6 years old is 1.950 children. So, we can see that not all of children in the age 5–6 years old entered the kindergarten but only few of them.

2. *Elementary school, Junior High School and Senior High School*

Elementary school is school that is provided for children in age 7 – 12 years old who has passed kindergarten. Junior high school is school that is provided for children in age 13 – 15 years old who has graduated from elementary school meanwhile senior high school is school that is provided for people in age 16 – 18 years old that has graduated from junior high school.

The number of these three levels of school in real number in 2004 is higher than planned number in 1994. The distortions that had occurred are positive distortions because of some reasons;

- First, these numbers have surpassed or fulfilled minimum standard that is specified in Decree of Ministry of Public Work No.534/KPTS/M/2001 concerning Guidance of Determination of Minimum Service Standard in Spatial Structuring, Housing and Settlement, and Public Work. So these numbers have fulfilled the need of Padang Panjang's population.
- Second, along this period of time (1994-2004) the need of these three levels of schools always increased because the increasing of the number of students. To cope with it, government had been perforce to build more school.
- Third, distance among sub districts or villages. The distance among sub districts need more school. Although one district only has few students but they need their own school. It is not efficient for them to join with another school that far from their village. Because of that,

along this period (1994 – 2004) government had increased the development of school building. So, the number became higher than planned number or minimum standard number where minimum standard only considered the population number not include distance among villages.

Although there was distortion if we analyse from location side where some locations of development of education facility especially school buildings were not in location that are suitable for education area and were specified before in Municipal Spatial Plan document but this distortion could be positive distortion if we analyse from performance view.

Shortly, the same with settlement area, in one side this distortion is negative distortion if we analyse from conformance view but one side it could be positive distortion if we analyse from performance view.

4.2.2. Factors that cause Distortion

There are many factors that cause distortion in implementing spatial plan. It can be internal factor for instance the quality of the spatial plan itself or perhaps external factors for instance situation along period of implementing this plan. To analyse what happened along the implementation of this plan is used performance approach.

The analysis of factors that cause distortion are divided into three, which are; 1) Analysis by using secondary data, 2) Analysis by using primary data, and 3) Combining both of them.

1. Analysis by using secondary data

This analysis is done for distortion that had occurred to settlement area and education facility that is by using data or documents that are derived from some institutions in Padang Panjang Municipality, such as Regional Planning Board, Public Work Bureau, Statistics Bureau and so forth.

The data are such as; document of Municipal Spatial Plan or RTRW Kota (*Rencana Tata Ruang Wilayah Kota*) of Padang Panjang 1994-2004,

document of Executive summary of Spatial Planning Evaluation of Padang Panjang Municipality 2001, document of Padang Panjang in Figures for some years, some documents of Government Regulations for example Local Regulation 14/1998 concerning Municipal Spatial Plan of Padang Panjang Municipality, document of Regional Development Program of Padang Panjang Municipality or Propeda (Program Pembangunan Daerah) 2001-2005 and so forth.

These data consist of data in statistic form and also in document form where from these data or documents can give information or explanation about situation, condition and what had happened in Padang Panjang Municipality along period of time 1994-2004 that influenced implementation of Municipal Spatial Plan of Padang Panjang Municipality.

So, by using this data or document it can be explained the reasons why distortion occurred in implementing Municipal Spatial Plan of Padang Panjang Municipality.

► Settlement Area

There were so many factors that made distortion had occurred in settlement area sector along period 1994-2004 of implementation Municipal Spatial Plan of Padang Panjang Municipality. This distortion can be divided into two; *first*, distortion that occurred based on acreage of settlement area and, *second*, distortion that occurred based on location of the settlement.

a. Distortion of acreage

The distortion of acreage of settlement area had occurred because of;

- Population growth.

Population growth in the beginning of planned year was very low but in 1998-1999 population growth had increased. The picture can be seen in **Figure 4.1.** below. This situation made the need of housing and settlement area also increased. So, government also increased the development of housing and settlement to fulfil this need.

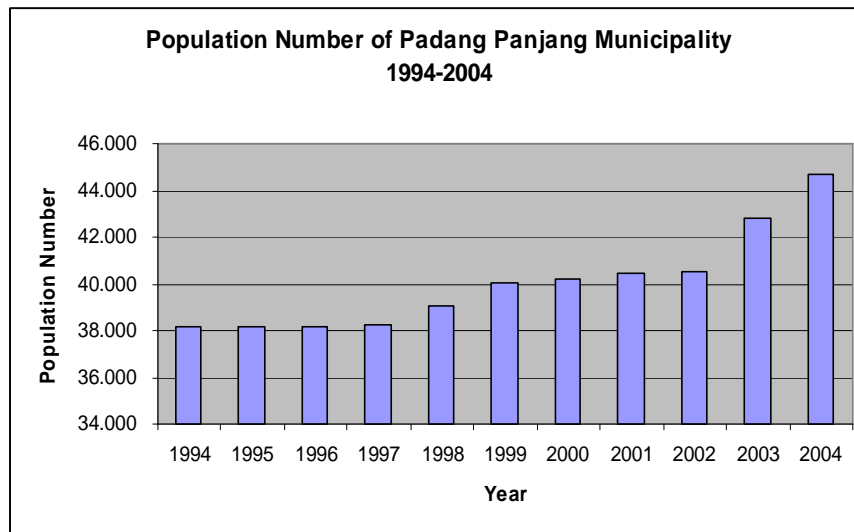


Figure 4.1. Population Number of Padang Panjang Municipality 1994-2004.

Population growth of Padang Panjang Municipality from 1994 until 2004 also can be seen from **Table 4.3**. Besides natural growth, population growth in Padang Padang Municipality is also caused by migration where there are many people migrate to Padang Panjang because Padang Panjang is located in strategic place. It is land gate with North Sumatera and Riau Province.

**Table 4.3
Population Growth of Padang Panjang Municipality 1994-2004**

No.	Year	Population	Growth	Growth Rate (%)
1.	1994	38.160		
2.	1995	38.158	-2	-0,01
3.	1996	38.124	-34	-0,09
4.	1997	38.257	133	0,35
5.	1998	39.057	800	2,09
6.	1999	40.074	1.017	2,60
7.	2000	40.169	95	0,24
8.	2001	40.466	297	0,74
9.	2002	40.544	78	0,19
10.	2003	42.817	2.273	5,61
11.	2004	44.699	1.882	4,40
	Average			1,61

Source : - *Executive Summary of Spatial Planning Evaluation of Padang Panjang Municipality 2001.*

- *Padang Panjang in Figure 2004 and Analysis result.*

From table above we can see that growth rate average from 1994 until 2004 is 1,61% per year. It is higher than growth rate average in *Common Planning for Regional Planning* where growth rate average from 1985-2004 is 0,29% per year based on *Executive Summary of Municipal Spatial Plan of Padang Panjang 1994-2004*. So, it needs more housing and settlement than estimation before.

- Forecasting of population number has significant difference with the real population number.

Forecasting for population that was done in 1994 for period 1994 - 2004 was lower than the real population at implementing time. In 1994, planner thought that growth rate average for 1994-2004 would rather the same with the average before, but apparently it is bigger than estimation before. For example forecasting that was done in 1994 for population derived number of population for 2004 was 42.497 in *Executive Summary of Evaluation of Municipal Spatial Plan of Padang Panjang Municipality 1994-2004* but in real time in 2004 the population was 44.699 meanwhile this population number was used to calculate the need for housing or settlement area. So, in practice the use of land for settlement area was increased or more than planning had estimated. It's mean more than estimation in Spatial Planning.

In here we can say that the quality of human resources that make the municipal spatial plan were still low. Because of that it was also influence the quality of the municipal spatial plan. It can be proved by forecasting of population above.

- Policies from Central Government especially from Ministry of Public Work that influence settlement sector.

In period 1994-2004 there were some central policies that influenced implementing of settlement development in Padang Panjang Municipality. These policies regulate and facilitate the implementation of development appropriation for housing and settlement. For example; Decree of Public Work Ministry number 01/SKB/M/2001 concerning collaboration decree

between ministry of settlement and ministry of cooperation in implementing settlement and regional facility, Decree of Public Work Ministry number 458/KPTS/M/2001, Decree of Public Work Ministry number 139/KPTS/M/2002 and it was renewed by number 24/KPTS/M/2003 concerning Providing of housing and settlement by support of loan or instalment of subsidized housing.

All of these central policies or regulations made easier to build housing or settlement not only for middle class but also particularly for lower class. Consequently, there were many housing and settlement that had been built in this period of time because of these policies.

Another example is Decree of Ministry of Regional Settlement and Infrastructure number: 217/KPTS/M/2002 concerning National Policy and Strategy of Housing and Settlement or KSNPP (*Kebijakan dan Strategi Nasional Perumahan dan Permukiman*). This decree specifies that housing and settlement as one of priority sector in development. Housing and settlement problem is strategic problem that had not got attention yet from many actors. Because of that, government proposed incentive system to support development actors, not only formal institution but also informal institution. They should involve actively in order to increase housing and settlement development growth. Some efforts that have been developed are through stimulant program, pioneering, finance support and technical support for responsive development actors in implementation of housing and settlement including assistance activity in preparing and society empowerment.

- In document of Regional Development Program of Padang Panjang Municipality or Propeda (Program Pembangunan Daerah) 2001-2005 was specified in 'priority of development program in 2001' that housing and settlement became one of major priority. In this program there were technical funds for societies who have low income. Consequently, this program also increased acreage of housing and settlement in Padang Panjang Municipality.

b. Distortion of location

The distortion of location of housing and settlement area had occurred because of some reasons, they are;

- Area that suitable for housing and settlement area in Padang Panjang Municipality is quite small only about 18%-21% from total area 2.300 Ha meanwhile the needs for settlement always increase, consequently people develop housing in area that actually not fulfil the requirements for developing housing. For example there were many housings or settlements that were built on area that were specified before for agriculture. In this case we can see for instance housing or settlement;

- “Perumahan Wisma Indah II”

This housing is located in Kampung Manggis Village with acreage 0,8 Ha, consists of 43 unit of housing.

- “Perumahan Silaing Permai”

This housing is located in Silaing Bawah Village with acreage 0,57 Ha, consists of 33 unit of housing.

- “Perumahan Saiyo Sakato”.

This housing is located in Silaing Bawah Village with acreage 0,5 Ha, consist of 15 unit of housing.

Besides that, there is also housing or settlement that was built on area with slope >15%, for example; “Perumahan Perbukitan Teduh”. This housing is located in Koto Panjang Village with acreage 1 Ha, consists of 72 unit of housing. It is one of factors that cause distortion in implementation of spatial plan that relates to settlement area particularly concerning its location.

The map of land suitability for settlement area can be seen in **Figure 4.2.** below meanwhile the distortion of settlement toward land suitability for settlement in 2003 can be seen in **Figure 4.3.** The detailed use of land for settlement area for each village in 2003 can be seen in **Table 4.4.** below. Unfortunately, data is only available for 2003 condition.

Table 4.4
The detailed use of land for Settlement Area
in Padang Panjang Municipality 2003

No.	District / Village	Acreage (Ha)	%
1.	Padang Panjang Barat		
	Bukit Surungan	21,41	6,744
	Kampung Manggis	32,27	10,170
	Pasar Usang	0,01	0,003
	Pasar Baru	10,66	3,358
	Silaing Atas	5,87	1,849
	Silaing Bawah	45,19	14,240
	Tanah Hitam	20,29	6,392
	Sub Total	135,70	42,750
2.	Padang Panjang Timur		
	Ganting	34,31	10,810
	Ekor Lubuk	30,42	9,583
	Guguk Malintang	19,63	6,184
	Koto Katik	16,19	5,100
	Koto Panjang	22,87	7,204
	Ngalau	41,04	12,930
	Sigando	15,23	4,798
	Tanah Pak Lambik	2,07	0,652
	Sub Total	181,75	57,250
	Total	317,45	

Source : Regional Planning Board of Padang Panjang Municipality, 2003.

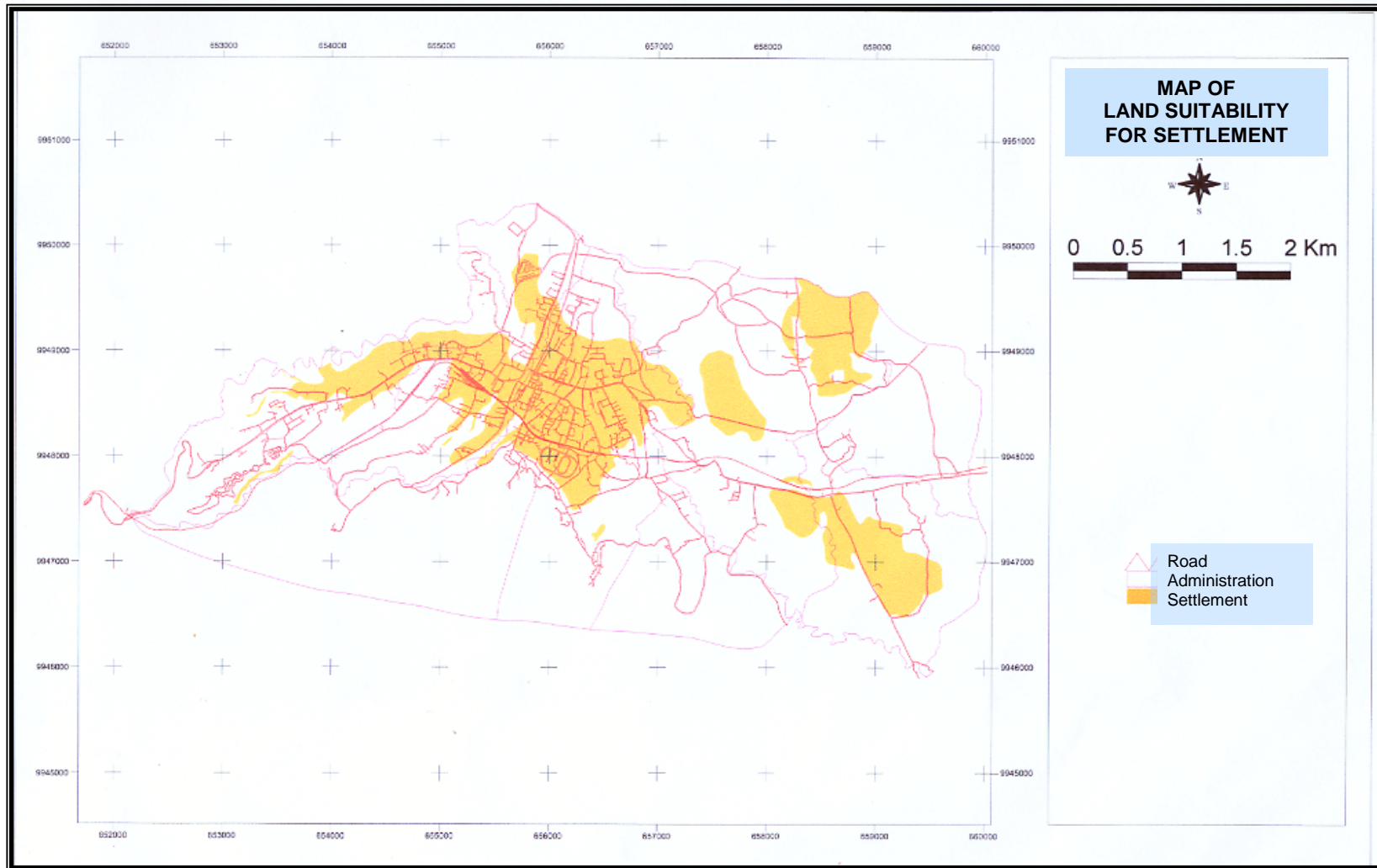


Figure 4.2. Map of Land Suitability for Settlement in Padang Panjang Municipality.

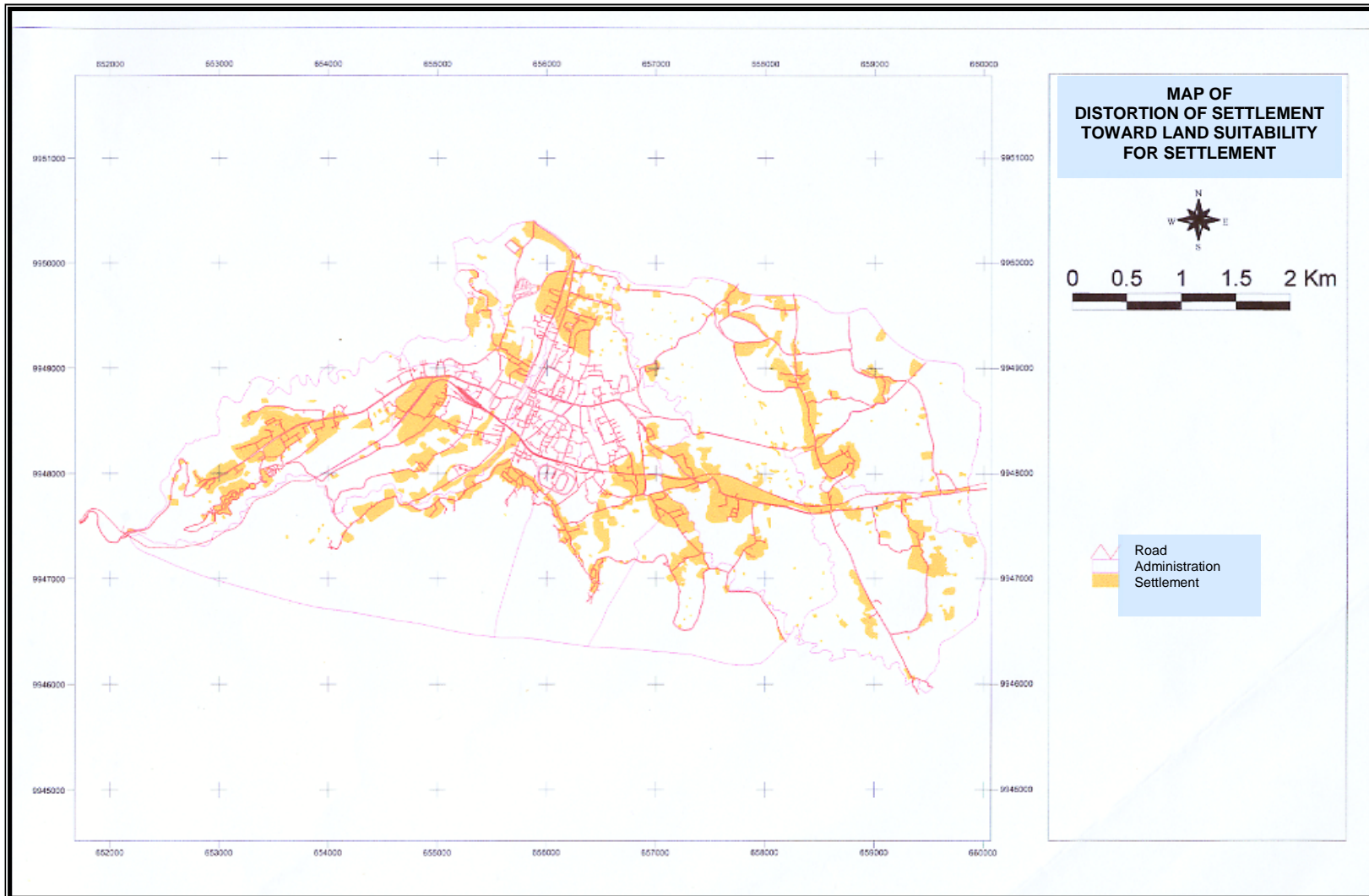


Figure 4.3. Map of Distortion of Settlement Toward Land Suitability For Settlement in 2003.

From **Figure 4.2.**, It can be seen the suitable area for settlement. This area is specified as settlement area based on geographical requirement where based on geographical requirement only small part of Padang Panjang area that is suitable for housing and settlement.

- Actually, area which is suitable for settlement still can fulfil the need of Padang Panjang's resident until a couple of years, but unfortunately until 2003 distortion had occurred from locations that were specified (can be seen in **Figure 4.3.** above). Based on information in document of Regional Development Program of Padang Panjang Municipality or Propeda (*Program Pembangunan Daerah*) 2001-2005, this was happened because weakness of law enforcement in Padang Panjang Municipality and low responsibility of all actors.
- Based on Regional Development Program of Padang Panjang Municipality 2001-2005, the distortion also occurred because of low awareness of society toward spatial plan, for instance emerging of slum area in river bank. Additionally, social behaviour of society that tend to build housing near the economic activity, for instance near commercial area although this area is not suitable for housing.
- Based on the number of development permit that had been published along this period (1994-2004), there are 154 development permits that were published in 1995, 203 in 1997 and decreased until it became 101 in 1999. Average decreasing rate per year was 10,01% along period 1995-1999. Drastic decreasing had occurred along 1997-1999. It means awareness of society to get development permit before developing the house was very low. It caused development of housing and settlement was not suitable with Detail Engineering Design or RTRK (Rencana Teknik Ruang Kawasan) of Padang Panjang Municipality.
- Based on Executive Summary of Spatial Planning Evaluation of Padang Panjang Municipality 2001, development permit sometimes is given to society although actually after it was checked into spatial planning document, this location is not suitable with its planned use. This is because of some reasons such as pressure of housing demand perforce they are given the permit. This is caused by society who will build house only have land in existing location and they did not able to buy land on area that already specified as housing or settlement area.

- Based on Executive Summary of Spatial Planning Evaluation of Padang Panjang Municipality 2001, basically housing and settlement in Padang Panjang Municipality is differentiated become two groups, they are; arranged housing and settlement⁴, and disorganized housing and settlement. Related to the two group types of this housing and settlement, the need of housing increased that caused number of these two groups of housing increased and also caused area that was used for settlement also increased. The increasing area for arranged housing caused distortion from acreage that had been planned before meanwhile the increasing disorganized housing number not only caused distortion in acreage of area for housing but also caused distortion in location for housing that had been planned before. This was proved by there are many disorganized housing at river bank and other locations that was not planned for settlement area.

► Education Facility

There were also so many factors that made distortion had occurred in education facility sector along period 1994-2004 of implementing Municipal Spatial Plan of Padang Panjang Municipality. The same with housing/settlement sector, this distortion also can be divided into two; *first*, distortion that had occurred based on the number of education facility particularly the number of school and, *second*, distortion that had occurred based on location of the school.

a. Distortion of the number of school

There were so many factors that had caused distortion in the number of education facility along period 1994-2004. They are;

- Development vision that was proposed in Basic Pattern of Development of Padang Panjang Municipality 2001 – 2005 specified that education as a basic for society development. Because of this development vision, government increased number of school as one of effort to improve education.
- The number of student that often increased along this period of time (1994-2004). The number of student can be seen in **Table 4.5.** and **Figure 4.4.** below.

⁴ Arranged housing and settlement is housing and settlement that had been planned and developed well, regularly.

Table 4.5.
The number of student every 3 years in Padang Panjang Municipality
1994 - 2004

No.	Education Level	Years			
		1995	1998	2001	2004
1.	Kindergarten	492	807	959	882
2.	Elementary School	6.002	6.151	6.613	7.616
3.	Junior High School	4.531	5.331	5.579	5.433
4.	Senior High School	6.504	6.844	7.464	7.438

Source: Padang Panjang in Figures 1995, 1998, 2001 and 2004.

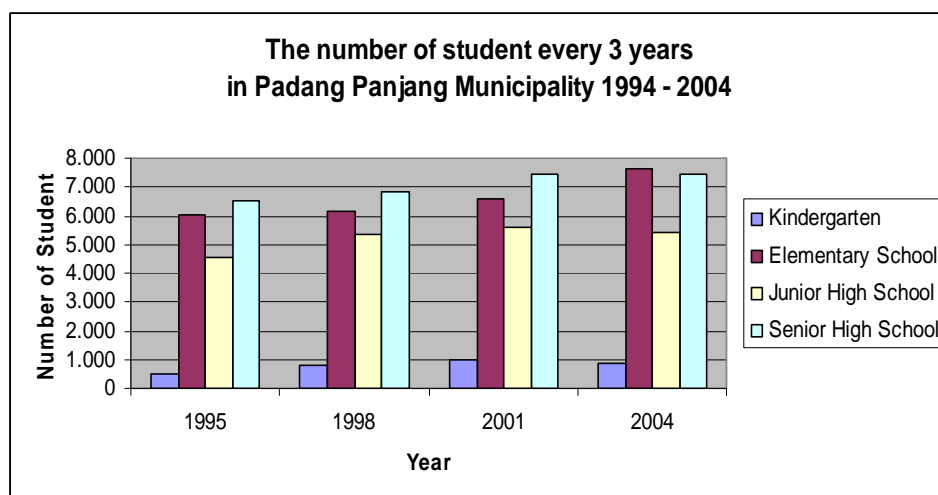


Figure 4.4. The number of student every 3 years in Padang Panjang Municipality 1994-2004

The increasing this number of students is out of estimation. This condition exceeded capacity of the school. Because of that, local government made policy to develop some schools more than what municipal plan had specified. According to document of Regional Development Program of Padang Panjang Municipality or Propeda (*Program Pembangunan Daerah*) 2001-2005, the increasing number of students in Padang Panjang had been caused by some factors;

- Increasing number of people who is interested in studying in Padang Panjang Municipality that came from outside Padang Panjang. It was caused by good education quality, strategic location where Padang Panjang is located in the intersection of some regencies and cities, and because of scholarship for smart students.
 - There was alleviation program of unschooled children by identifying and giving funds for low income family.
- The schools in Padang Panjang Municipality are used not only by Padang Panjang people but also by other people from outside Padang Panjang Municipality, meanwhile in planning in 1994 government did not really consider other people from outside Padang Panjang Municipality. This condition can be seen from table below.

Table 4.6
The number of students from outside Padang Panjang Municipality in 2004

No.	Level of School	Population number based on age in 2004	Student number (real condition) in 2004	Student from outside Padang Panjang
(1)	(2)	(3)	(4)	(5) = (4) – (3)
1.	Kindergarten (5 – 6 years old)	1.950	882	-
2.	Elementary School (7 – 12 years old)	5.702	7.616	1.914
3.	Junior High School (13 – 15 years old)	2.815	5.433	2.618
4.	Senior High School (16 – 18 years old)	2.808	6.358	3.550

Source : Padang Panjang in Figures 2004 and data analysis result.

- Along this period of time (1994-2004) the need of these three levels of school always increased because of the increasing number of students. To cope with it, government perforce to build more school.
- Distance among sub districts or villages also caused the increasing number of school. The distance among sub districts makes more need for school.

Although one district only has few students but they need their own school. It is not efficient for them to join with another school that far from their villages. Because of that, along this period (1994 – 2004) government had increased the development of school building. So, the number became higher than planned number or minimum standard number where minimum standard only considers about population number not include distance among villages.

- Central policies that influenced implementing spatial planning in Padang Panjang Municipality, for instance policy about special allocation funds or DAK (Dana Alokasi Khusus) for developing school. There is no relationship between these programs with Municipal Spatial Plan. So, these programs are outside the Municipal Spatial Plan. For example senior high school development or development of SMU 2 Padang Panjang.

b. Distortion of location

Not only distortion from the number of education facility particularly the number of school, but also there was distortion of location. This distortion was caused by the need for education facility especially area for school building that was higher. It made the school building developed in other area that is not for school area actually. For example;

- Industry in Padang Panjang Municipality was not expanded enough meanwhile in Municipal Spatial Plan of Padang Panjang Municipality 1994-2004 the area for industry was provided large enough. Consequently, there was much area specified for industry that had not been used yet. On the other hand, the need for school building always increases. So, government made policy to build school on industry area. For example SMA 3 in Silaing Bawah Village. The development permit and site plan of this school can be seen in **Appendix 1**. From these documents we know that local government perforce to give permit to build this school on industrial area.
- SLTP Swasta (Private Junior High School) and SMU Swasta (Private Senior High School) Uswatun Hasanah in Ngalau Village that were built on Agricultural land.

2. Analysis by using primary data

This analysis is done for distortion that had occurred to settlement area and education facility by using information that is derived from interview result of some stakeholders in Padang Panjang Municipality, they are; Head of Regional Planning Board of Padang Panjang Municipality, Head of Spatial Planning division at Public Work Bureau, and Head of Environment Monitoring and controlling section at Environmental Bureau. The original interview results can be seen in **Appendix 2**.

► Settlement Area

Based on some interview result, it was known some factors that caused distortion in implementation of Municipal Spatial Plan of Padang Pandang Municipality for period 1994-2004 related to settlement sector, they are;

1. According to Head of Regional Planning Board of Padang Panjang Municipality – **Budi Hariyanto, ST**⁵.
 - Some societies often built housing and settlement on land that were not specified for housing or settlement area. There were many housing and settlements that were built by society individually and they tend to develop linearly along roadside and also on land that the ownership belongs to certain group of society where in Padang Panjang Municipality it is called by '*tanah kaum*'⁶. This land is very difficult to manage because it has no land certificate that belongs to a group of community.
 - Some of land that were specified for housing and settlement area in Municipal Spatial Plan 1994-2004 are located on *tanah kaum* or *tanah adat* that has not divided yet. There were also some of land specified for housing and settlement but the topography condition has slope more than 25%. So, it is impossible to build housing or settlement there.

⁵ Before as Head of Regional Planning Board, he ever had position as Head of Public Work Department, Head of Environment Bureau, and Assistant I of Padang Panjang Municipality Mayor.

⁶ Tanah kaum is land that is owned by a group of people that inherited from their ancestors.

- Sanction in Local Regulation had not implemented maximally yet toward development of housing or settlement that were built on area that actually were not for housing or settlement.
- The increasing need of housing or settlement is big enough meanwhile area for it, is limited. Padang Panjang only has around 21% area that effectively can be developed (slope; 0-15%). Because of that, many societies who only have land for agriculture built housing or settlement on that area, for instance on agricultural land that was not productive anymore. The example for this case is housing or settlement that was built in Sago, Ngalau Village, East Padang Panjang District. Commonly, these houses or settlement did not have development permit.
- Assumption for external factors has not maximal yet in making process of Municipal Spatial Plan and analysis is still not well enough.

2. According to Head of Spatial Planning Division of Padang Panjang Municipality – **Drs. Andry. K**

- Development permit sometimes is given to society although actually after it was checked into spatial planning document this location is not suitable with its planned use but because of some reasons such as pressure of housing demand perforce they give the permit. This is caused by society or people who will build house only have land in existing location and they were not able to buy land to develop house on area that already specified as housing or settlement area. This statement is also in line with the reason that is explained in Executive Summary of Spatial Planning Evaluation of Padang Panjang Municipality 2001, page II-4.
- Development of some houses that follow other facilities, for example education facility. When one school was built automatically some houses will emerge surround it.
- There was the shift of land use from agricultural land into non-agricultural land because this agricultural land had not been productive anymore meanwhile the demand for houses always increase.

3. According to Head of Monitoring and Controlling of Environment in Environment Bureau of Padang Panjang Municipality – **Maisir.T, SE**

- The weakness in substances of Municipal Spatial Plan of Padang Panjang Municipality 1994-2004 because it used invalid data in analysis of need, for example prediction of population number by using population growth 0,29% the same with condition before planned year.
- There were so many investors and developers invested and developed housing and settlement because it was easier to get development permit in that period of time. For example “Perumahan Padang Reno”.
- There were some urgent needs for housing or settlement that caused Public Work Department particularly PU Cipta Karya division did not fully pay attention to municipal spatial plan of Padang Panjang Municipality in improvement of urban facilities number.
- Growth dynamic was very fast meanwhile municipal spatial plan was planned for 10 years caused function of this spatial plan did not effective or did not really had a function. In other word, sometimes this Municipal Spatial Plan was out of date if it was compared with situation along the period of its implementation.

► **Education Facility**

There are some information that are derived from stakeholders above who were interviewed about distortion in implementation of spatial plan for education facility. The factors that caused this distortion are;

- The number of kindergarten along period 1994-2004 was lower than in planned number in Municipal Spatial Plan of Padang Panjang Municipality because there was policy from Central Government, Province, and Local Government in education sector that suggests children to join PAUD (*Pendidikan Anak Usia Dini*) or early childhood education before entering kindergarten. In Padang Panjang, PAUD has existed until village level. This condition has big influence to kindergarten.

- Learning process in Elementary School, Junior High School and Senior High School must be based on SPM (*Standar Pelayanan Minimum*) or minimum service standard of education. One of the standards is about maximum capacity for one class where it is allowed only for 30 students. This standard is lower than analysis of space need in Municipal Spatial Plan of Padang Panjang Municipality 1994-2004.
- Besides students from Padang Panjang Municipality, these schools also accommodate students from outside Padang Panjang Municipality or hinterland area such as from Tanah Datar Regency and Padang Pariaman Regency.

3. *Combining of both of two analysing*

Finally, after combining between secondary data analysing and primary data analysing, it can be concluded that factors that influence implementing of spatial planning can be divided into two they are; a) Internal factors, and b) External factors.

a. Internal Factors

Internal factors are factors that come from substance of Municipal Spatial Plan of Padang Panjang Municipality or RTRW itself and influence the quality of Municipal Spatial Plan. These factors are;

- Quality of human resources who made Municipal Spatial Plan that influenced quality of Municipal Spatial Plan it self. For example, people who made this plan used inappropriate method for forecasting of population growth.
- Lack of basic data that really important as fundamental data in planning making process either in quality or quantity. One of three factors that Talen (1997) states as cause of failure in planning is uncertainty and lack of available knowledge (related to lack of data, for example).
- In making Municipal Spatial Plan has not really considered about external factors yet whereas it will really influence its implementation. These external factors are uncertainties that really difficult to estimate when spatial planning was made. Hall (1980) has recognized the limitations of planning in the face of uncertainty so much and has documented the disastrous effects that can result from this circumstance.

- Making process of Municipal Spatial Plan that has not thoroughly involved society yet. One of three factors that Talen (1997) states as cause of failure in planning is political complexities and lack of societal consensus.

b. External Factors

External factors are factors that come from outside substance of Municipal Spatial Plan of Padang Panjang Municipality or RTRW itself and influence the implementation of Municipal Spatial Plan. They are:

- Commitment of actors that were not actualized, for instance giving development permit by authorized institution to housing building which was located on location that is not specified for housing area. “Lack of funding and weak local commitment have stymied the efforts of planning to effectuate change” (Smith, 1991 in Talen 1997 page 578).
- The weakness of law enforcement. The weakness of law enforcement made actors who involves in spatial planning easy to break the law that was stated in spatial planning.
- Other policies from local government that influenced implementing of Municipal Spatial Plan, for instance policy that was specified in Regional Development Program of Padang Panjang Municipality 2001-2005 or Propeda (*Program Pembangunan Daerah*) that Padang Panjang should improve its education facility. Automatically, one of steps that local government had done was by adding more school building.
- Central policies that influenced spatial planning in region. For example policies in housing sector that made easier to build housing, policies in education sector that made the number of school increase.
- Talen (1997) also concludes some experts’ ideas that distortion is also caused by political factors as one of factors beyond planning, too many other forces at work, too many forces beyond local planning control for planning to hope to achieve its stated goals, lack of funding or economic constraints, and weak local commitment.

4.3. The Role of Municipal Spatial Plan of Padang Panjang Municipality 1994-2004

From analysis above we know that actually Municipal Spatial Plan of Padang Panjang Municipality 1994-2004 had been done maximally but there were many factors that influenced its implementation that could not be avoided. Although subsequent decisions, actions, and outcomes or its implementation sometimes were different from what was intended in Municipal Spatial Plan, even not followed, but the Municipal Spatial Plan was useful in bringing about the decision.

Actually, in some cases, local government of Padang Panjang Municipality as policy makers or decision makers had used the plan by using it as formed part of their considerations during decision making, but after due consideration, they had concluded that the decision should be otherwise, but at least in this case it would be obvious that the plan had in effect helped to resolve some of the issues for example SMA 3 case. Because of the need for school building in Padang Panjang Municipality along period 1994-2004 where for instance in the beginning to fulfil demand for school building SMA 3 was planned in area that was provided for education area but because area for education facility was not available enough, so local government of Padang Panjang Municipality found another solution by considering other area in Municipal Spatial Plan that possible to shift became education area. Shortly, local government departed from the plan and developed school in industrial area that was provided enough because industrial sector was not developed enough. In this case, local government of Padang Panjang still provide guidance for Municipal Spatial Plan of Padang Panjang Municipality to make this decision. This is the same as asking “whether plans in fact act as the framing devices which they are purported to be” (Healey, 1994, page 48 in Faludi and Altes, 1994, page 404).

Healey (1994, page 42) in (Faludi and Altes, 1994, page 407) identifies the role of plans as “...to shape, or structure, the decisions of those who acknowledge its importance. Furthermore, Mastop and Faludi (1997) state that the prime concern should not be with whether or not the plan is followed, but with whether the plan plays a role in those decision situations in which it was meant to be used.

Although from conformance view in implementing Municipal Spatial Plan of Padang Panjang Municipality distortion had occurred but according to Mastop and Faludi (1997) a plan performs for as long as it is being used as a frame of reference, be it with conforming or nonconforming results.

Finally, along period 1994-2004 the idea or goal of this spatial plan had been still used although inevitably negative reasons also exist among them that make the performance of implementation of this spatial planning not really maximal enough.

4.4. Concluding Remarks

By using conformance approach it is very easy to judge a distortion of spatial planning whether positive or negative without considering the reasons why this distortion occurred. It will automatically negative distortion if outcome is not the same with the plan. Like case study in Padang Panjang Municipality that is analysed above derived negative distortion.

If analyse of distortion only use conformance approach, it is almost possible to get negative distortion because the plan is planned for long time. In this case, Municipal Spatial Planning of Padang Panjang Municipality is used for ten years. During ten years there are many factors that will influence the implementation of this plan, so shifting from original plan is very possible to occur.

From this research is proven that if only uses conformance approach the distortion will be negative distortion but if uses performance approach the distortion becomes positive distortion because there are many positive reasons that cause this distortion perforce occurred, for example the increasing of settlement or housing need and school need.

The overview of distortion analysis of implementation of Padang Panjang Municipal Spatial Plan 1994-2004 and the reasons for determining the distortion type can be seen in **Table 4.7.** below.

Table 4.7.

An Overview of Distortion Analysis of Implementation of Padang Panjang Municipal Spatial Plan 1994-2004

No.	Analysis	Sectors	Result	Reasons	End Result
1.	<i>Conformance</i>	Settlement Area	(-) distortion	Outcome ≠ Plan - Implemented area ≠ planned area. - Implemented location ≠ planned location.	(-) distortion
		Education Facility	(-) distortion	Outcome ≠ Plan - Implemented number of school ≠ planned number of school. - Implemented location ≠ planned location.	
2.	<i>Performance</i>	Settlement Area	(+) distortion	It has some positive reasons : - Population growth made the need of housing and settlement area also increased and fortunately settlement area that has developed in 2004 was still lower than total suitable area for settlement. - Distortion in location side is considered usual because area that suitable for housing and settlement area in Padang Panjang Municipality is quite small.	Almost (+) distortion
		Education Facility	(+) distortion	It has some positive reasons : - The number of school have surpassed or fulfilled minimum standard. - More efficient because government built the school based on the actual need each year. - To fulfil the need of school that always increases because of the increasing number of students and the distance among villages. - To fulfil development vision where education as a basic for society development. - Utilize other area that less developed for its usefulness.	
		Settlement Area	(-) distortion	It has some negative reasons: weakness of law enforcement, low responsibility of all actors, and low awareness of society toward spatial plan caused distortion on location of housing, besides because of land scarcity for housing.	

Source: Analysis Result

Chapter 5

Conclusion and Recommendation

This last chapter discusses and concludes comprehensively previous chapters. It provides reflection of Municipal Spatial Plan of Padang Panjang Municipality supported by some theories in order to give some lessons to be learnt. For this purpose, it firstly answers the research questions based on analysis of distortion in previous chapter.

Finally, at the end of this chapter, it also provides some recommendations to analyse distortion and to cope with factors that cause distortion in implementation of Municipal Spatial Plan.

5.1. Conclusion

Distortion in implementation of spatial planning is prevalent to occur. Commonly, people only analyse distortion that occurred in implementation of a spatial planning particularly a Municipal Spatial Plan by using conformance view. They easily judge distortion that occurred is negative distortion without considering about its reason, but knowledge always develop then emerged notion that plan is not something which should be followed strictly because there are so many uncertainties influence it.

An analysis can be done to know whether distortion had occurred in implementation of Municipal Spatial Plan or not. The simple analysis is by using conformance approach. It is by comparing the implementation of the Municipal Spatial Plan or the outcome with the original plan. If distortion value is zero, its means 'there is no distortion' because the outcome is the same with the plan. On the other hand, if distortion value is not zero, its means 'there is distortion' because the outcome is not the same with the plan. Through this analysis is also derived the distortion value automatically.

Subsequently, to determine distortion type whether positive or negative, it can be used some approaches. Conformance approach is the common approach that is used to determine the distortion type. Meanwhile through this research, performance approach is proposed to be used. Performance approach is not only comparison between planning with its outcome, but the important thing is the process between them. Performance approach analyses factors which cause distortion or factors which influences the implementation of Municipal Spatial Plan to determine the distortion type.

In conclusion, by using conformance approach it is very easy to judge a distortion of spatial planning whether positive or negative without considering the reasons why this distortion occurred. Likewise case study in Padang Panjang Municipality, it is derived negative distortion. On the other hand, from this research is proven that distortion possibly becomes positive distortion if analysis uses performance approach because there are many positive reasons that cause this distortion perforce occurred.

Based on this research, it is proposed to use both of these two approaches. Conformance approach is used in the beginning to prove that distortion had occurred. Subsequently, performance approach will be used to analyse the type of this distortion whether positive or negative distortion. The overview of the use of these approaches can be seen in **Table 5.1.** below.

Table 5.1.

An Overview of Distortion Analysis Approaches of Implementation of Municipal Spatial Plan

No.	Steps of Analysis	Approaches		Methods of Analysis	Considerations	The Way	Result
		Conformance	Performance				
1.	Determine distortion value	✓		Statistical analysis	- Spatial Plan - Outcome	Comparing the considerations	Distortion value
2.	Determine whether the distortion is positive or negative distortion	✓	✓	Statistical analysis and Descriptive analysis	<p><u>Conformance:</u> Its distortion value</p> <p><u>Performance:</u> Policy, situation, condition, what happened along the plan period.</p>	<p><u>Conformance:</u> Analysis distortion value, if; - Zero (0) = no distortion - Not zero ($\neq 0$) = distortion = negative distortion</p> <p><u>Performance:</u> - Read and learn documents. - Read and learn interview results.</p>	<p>Distortion Type</p> <p>Distortion Type</p>

Source : Analysis Result

Actually, distortion can be occurred in implementation of Municipal Spatial Plan because of some factors. Based on Padang Panjang Municipality case, it can be occurred because of two factors. The factors are; internal factors and external factors. Internal factors are factors that come from substance of Municipal Spatial Plan of Padang Panjang Municipality itself and influence the quality of the Municipal Spatial Plan. Meanwhile, external factors are factors that come from outside substance of Municipal Spatial Plan of Padang Panjang Municipality and influence the implementation of Municipal Spatial Plan, for instance situation during period of implementing this plan. Additionally, based on profile or overview of Padang Panjang Municipality which are described in **Chapter 3**, there are some aspects that also very influenced implementation of this plan, they are; condition of geography, demography, governance, economy, education, politics, and social of Padang Panjang Municipality.

Shortly, based on Padang Panjang case, it can be concluded that distortion had been occurred in implementation of Municipal Spatial Plan because of these reasons:

- Internal Factors
 - Quality of human resources who made Municipal Spatial Plan that influenced quality of Municipal Spatial Plan itself.
 - Lack of basic data which really important as fundamental data in planning making process either in quality or quantity.
 - In making Municipal Spatial Plan has not really considered about external factors yet whereas it will really influence its implementation. These external factors are ‘uncertainties’ that really difficult to estimate while spatial planning was made.
 - Making process of Municipal Spatial Plan that has not thoroughly involved society yet.
- External Factors
 - Uncertainties and unpredictable changes during implementation of Municipal Spatial Plan.
 - Other policies from local government that influenced implementation of Municipal Spatial Plan

- Central policies that influenced Municipal Spatial Plan.
- Political factors as one of factors beyond planning, precisely because of political or economic constraints.
- Commitment of actors that were not actualized, for instance; giving development permit by authorized institution to housing building which was located on location that is not specified for housing area.
- The weakness of law enforcement. The weakness of law enforcement made actors who involves in spatial planning easy to break the law that was stated in spatial planning.

Based on analysis of distortion in implementation of Municipal Spatial Plan of Padang Panjang Municipality 1994-2004, it can be concluded that actually Municipal Spatial Plan of Padang Panjang Municipality 1994-2004 had been done maximally, but there were many uncertainties and factors which influenced its implementation. These factors could not be avoided. Although subsequent decisions, actions, and outcomes or its implementation sometimes were different from what was intended in Municipal Spatial Plan, even not followed, but the Municipal Spatial Plan was useful in bringing about the decision, the plan had in effect helped to resolve some of the issues. According to Alexander (1981), “implementation is still important but departures from plans are still accepted as long as outcomes are beneficial because he recognises uncertainty”.

Finally, during period 1994-2004 the idea or goal of this spatial plan in Padang Panjang Municipality had been still used although inevitably negative reasons also exist among them. Shortly, Municipal Spatial Plan of Padang Panjang Municipality 1994-2004 still has significant role during this. It is supported by opinion of Mastop and Faludi (1997). They had a notion that a plan performs for as long as it is being used as a frame of reference whether it with conforming or nonconforming results or whether it is followed or not. Furthermore, according to Faludi (1987), change in decision situations is very possible between planning and operational decision making or implementing. So, nonconformity of outcomes or nonimplementation of plans is not necessarily failures. Shortly, it is not necessary to follow plan strictly.

Based on the understanding of Padang Panjang Municipality case study above, there are some important lessons for other planners, policy maker or local government, next researchers, and whoever that involved in Municipal Spatial Plan. First of all, to analyse distortion in implementation of spatial planning or Municipal Spatial Plan not merely uses conformance approach. In other word, it is not easily judge a distortion as negative distortion only from conformance view. Furthermore, hopefully, we are not only glued to conformance approach in analysing distortion but more consider about performance approach which consider the reasons why distortion occurred. According to Mastop and Faludi (1997, page 815), “plans cannot be judged merely in terms of conformance between a plan and final outcomes”. Because of that, performance approach is proposed to be used to analyse the distortion.

Second, we should be more sensitive on factors that cause distortion not only internal factors but also external factors to make Municipal Spatial Plan more efficient and can be implemented optimally.

5.2. Recommendation

Finally, there are two types of recommendation which are proposed; recommendation for distortion analysis and recommendation to cope with factors which cause distortion.

1. Recommendation for distortion analysis

I propose some recommendation for distortion analysis as follows;

- Shift the way of thinking.

Planners, policy maker or local government, next researchers, and whoever that involved in Municipal Spatial Plan should shift their way of thinking about distortion in implementation of the plan. They should realise that distortion not always means negative distortion but sometimes it also has positive meaning. It depends on the reasons why this distortion occurred and what factors that cause or influence this Municipal Spatial Plan during its implementation.

- Change approach that is used in analysing or evaluating distortion.

Commonly, analysis of distortion in implementation of Municipal Spatial Plan uses conformance approach, the approach which compare outcome with the original plan. This approach is not because it only gives distortion value without reasons why the distortion occurred. It should be changed with more appropriate approach.

Performance approach is more appropriate approach which not only compare outcome with the original plan but more consider about factors or the reasons that cause distortion. By this approach, we will analyse the reasons of the distortion, so with this reasons it could be concluded distortion which is occurred is not always negative distortion. This approach more focuses on condition during implementation period. Additionally, by knowing factors which cause distortion, it can be as consideration for next plan making, so the next plan will be more effective.

2. Recommendation co cope with factors that cause distortion

Although distortion in implementation of a Municipal Spatial Plan is also has positive distortion, but however factors that can cause distortion in implementation of Municipal Spatial Plan should be minimised or even avoided in order to anticipate negative distortion.

Factors that can cause distortion should be avoided in order to actualize effective planning but not all these factors should be avoided, it only the factors that cause negative distortion because like what Mastop and Faludi (1997, page 825) “stated departures from a planning statement do not necessarily mean failure and departures are perfectly normal phenomena which we must learn to live with”.

There are many ways to cope with the factors that cause distortion or to minimize or even omit the distortion that are not wanted in implementation of Municipal Spatial Plan in general and particularly Municipal Spatial Plan of Padang Panjang Municipality, they are;

Internal factors

The main recommendation to cope with the internal factors is to improve the quality of Municipal Spatial Plan. There are some ways which are recommended as follow.

- Do data validation as basic data to get accurate analysis result.
- Improve the analysis in process making of Municipal Spatial Plan like analysis of potency, the need of space, land capability, and external factors.
- Estimation for number of facilities that are needed should not only consider about population number but also the function and activities pattern of this city. Because of that planners should be able to estimate the future need.

“However, decision makers, analysts, and planners also have an obligation to incorporate uncertainty into their policies and plans, in the form of prediction and projection of possible outcomes and context scenarios, flexibility, and adaptability of adopted strategies. Accordingly, the evaluation includes judgments about the degree to which changes in the decision situation could have been predicted or anticipated.” (Alexander and Faludi, 1989, pages 138-139).

- Improve capacity building of planners not only through formal education but also through course, seminar, and workshop which relate to spatial planning task. During this time, compiling activity of Municipal Spatial Plan and other spatial plan document is handed over to consultant agency. It makes ability of planners in local government does not develop. Because of that, it is important to consider about self-management where consultant only as advisor and facilitator.
- Planners should know how a good planning does. For example planning statements must form part of the definition of subsequent operational decision situations (Faludi, 1986).in Mastop and Faludi (1997).
- Analyse data comprehensively by involving stakeholders and experts with some knowledge in making process Municipal Spatial Plan.
- Policy maker or local government should analyse more deeply before assigning spatial planning, analyse the possibility of distortion that can be occurred and accommodate citizen needed in line with space capability to accommodate this need.

- Increase the involving of society in making process of Municipal Spatial Plan. According to Conyer (1984), there are three main reasons why society participation is very important in planning activity, they are; (1) Society participation is important to get information about condition, need, and attitude of local society, (2) Society will be more believe in development program or planning if they are feel involved in process of preparation and planning because they know more about details of planning and they will have sense of belonging to the planning, (3) It is one of democracy rights if society is involved in their own society development. Furthermore, according to Faludi (2000) people may do what is required, not because they are guided by a plan but because they think the same way about problems.

External Factors

There are some ways which are recommended to cope with external factors as follow.

- Prepared and provide space⁷ for possible uncertainties, changes, unpredictable central policies even policies from local government itself during implementation of Municipal Spatial Plan by learning from previous plan experiences.
- More consider about political factors as one of factors beyond planning, precisely because of political or economic constraints.
- Applying of sanction or take actions against violation toward regulation in Spatial Planning included Build and Its Permit regulation or other related regulations.
- Develop audit concept of Municipal Spatial Plan as monitoring and evaluating instrument or implementation controlling of Municipal Spatial Plan.
- Evaluate and revise periodically Municipal Spatial Plan to adjust with development and changes in spatial plan.

⁷ Here, space means place in implementation of spatial plan that is provided if there is unpredictable policies that has not been predicted yet in plan making process.

- Improve the involving of society in implementing and controlling spatial plan. “Plan makers need to take account of the distinct possibility of subsequent decisions deviating from the plan. Likewise, recipients need to take account of the plan”. (Mastop and Faludi, 1997, page 823).
- Municipal Spatial Plan of Padang Panjang Municipality should be socialized or introduced to institutions and actors in Padang Panjang, hopefully these institutions and actors can use directives that were specified in Municipal Spatial Plan. Finally, the distortion particularly negative distortion can be reduced or perhaps omitted.

Finally, according to Talen (1997), by knowing the factors that influence the implementation of spatial planning, it can be used for positive light as factors which define the scope and limits of planning where these limitations do tend to focus our attention on what planning cannot do. By knowing what planning can not do will minimise distortion in implementation of the plan. So, in this case, planners should really understand the factors that will influence a planning implementation thus in planning making process planners know what planning cannot do.

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