

## Local Level Planning Process Improvement in Infrastructure Development: Case Studies in Thai Sub-District Local Government

การปรับปรุงการวางแผนในการพัฒนาโครงสร้างพื้นฐานของ อบต.  
กรณีศึกษา องค์การบริหารส่วนตำบลในประเทศไทย

Narong Leungbootnak (ณรงค์ เหลืองบุตรนาค)<sup>1\*</sup>

Chotchai Charoenngam (โชติชัย เจริญงาม)<sup>2</sup>

### Abstract

Any planning process is considered to be the most critical function influencing the success of infrastructure development, especially at the local government level. In Thailand, the Tambol Administrative Organization (TAO), which is the smallest local government unit, was recently outlined as a rural development initiative. This study initiates an improvement of the current planning system for infrastructure development. The research methodology is outlined in three stages: problem identification and classification by focus group discussion sessions, problem examination by case studies, and review of the planning improvement system development by focus group interviews. Five key problems were identified as follows: operational problems, functional problems, knowledge competency problems, public participation problems, and government related problems. These problems were further regrouped into four concepts affecting the improvement process: knowledge competency concept, quality management concept, good governance concept, and public participation concept. These improvement concepts, through the focus group sessions with chosen major stakeholders of the TAO, are reviewed and updated until a satisfactory improvement process is achieved. The final improvement process shows the most effective procedures as well as the duties and responsibilities of the major stakeholders therein.

### บทคัดย่อ

ในการดำเนินงานกิจกรรมใดๆ จะยึดถือการวางแผนเป็นหลัก ซึ่งการวางแผนนี้จะส่งผลต่อความสำเร็จของงานเป็นอย่างมาก องค์การปกครองส่วนท้องถิ่น โดยเฉพาะองค์การบริหารส่วนตำบล (อบต.) จะมีหน้าที่ในการคิดทำโครงการเพื่อการพัฒนาท้องถิ่นแต่ละแห่ง ในการศึกษาครั้งนี้จะหาแนวทางในการปรับปรุงการวางแผนในการพัฒนาโครงสร้างพื้นฐานของอบต. ให้มีประสิทธิภาพสูงขึ้น โดยมีวิธีการวิจัยไว้สามขั้นตอนหลัก คือ การระบุปัญหาและแยกกลุ่มปัญหา โดยการใช้วิธีการเก็บข้อมูลแบบประชุมกลุ่มต่างๆ ขั้นที่สอง คือ การตรวจสอบปัญหาต่างๆ โดยใช้วิธีการเก็บข้อมูลแบบกรณีศึกษา และขั้นที่สามเป็นการพัฒนาแนวทางแก้ปัญหาและปรับปรุงการวางแผนของอบต. โดย

<sup>1</sup> Assistant Professor, Department of Civil Engineering, Faculty of Engineering, Khon Kaen University, Thailand

<sup>2</sup> Construction Engineering and Infrastructure Management, Asian Institute of Technology, Thailand

\*corresponding author, e-mail: narong\_fec@yahoo.com

ใช้วิธีการเก็บข้อมูลแบบประชุมกลุ่ม จากการศึกษาพบว่าอบต. มีปัญหาหลัก ๆ 5 อย่าง คือ ขั้นตอนการทำงานไม่ชัดเจน บทบาทหน้าที่ความรับผิดชอบของบุคลากรอบต. ไม่ชัดเจน ความรู้ความเข้าใจในการทำงานของอบต. ไม่สมบูรณ์ การมีส่วนร่วมของประชาชนในชุมชนไม่ชัดเจน และความร่วมมือของหน่วยงานราชการต่างๆ ไม่มีประสิทธิภาพ ซึ่งปัญหาต่างๆ เหล่านี้ ถูกจัดเป็นกลุ่มและใช้สีทฤษฎีมาแก้ไขและปรับปรุง ซึ่งประกอบด้วย หลักความรู้ความเข้าใจ หลักการบริหารคุณภาพ หลักธรรมาภิบาล และหลักการมีส่วนร่วม ซึ่งหลังจากมีการพัฒนาระบบปรับปรุงประสิทธิภาพการพัฒนาโครงสร้างพื้นฐานของอบต. แล้วเสร็จ ได้ส่งให้อบต. กลุ่มตัวอย่างทบทวนตรวจสอบอีกครั้งหนึ่ง โดยวิธีประชุมกลุ่มย่อย เพื่อปรับปรุงเพิ่มเติมในรายละเอียด

**Keywords:** Local Government, Infrastructure development, Planning system improvement process

**คำสำคัญ:** องค์การปกครองส่วนท้องถิ่น การพัฒนาโครงสร้างพื้นฐาน ระบบการวางแผน การปรับปรุงกระบวนการ

## Introduction

Public sector decentralization is undertaken mainly in pursuit of a vast range of development policies and goals. The actual process, which is dependent on such policies, is complex and subject to diverse interests in line with certain objectives of decentralization such as the improvement of income and living. Not only democratic countries but socialist countries like China and Russia have also implemented the decentralization system (Serdar, 2001). The implementation of decentralization programs was initiated in the West, and later adapted in the East, especially in Asia and Thailand in particular. A few countries, such as India and the Philippines, already have substantial experience over the years and are currently building on past efforts. It is however worthy to note that decentralized systems will not succeed without support from the central and state governments recognizing it as the mandate of the country. Lack of effort and inadequate national commitment has been a key factor predictably leading to unsatisfactory results (Smoke, 2001). Initially implemented in 1992, Thailand's decentralization scheme became an active policy

issue and later contributed to major substantial changes in the new constitution of 1997. These changes affected the incorporation of decentralization in at least eight sections of the new constitution and clearly stated that the state shall decentralize powers to localities and provide such localities the right to formulate their own self-governing bodies (Thai Parliament, 1997).

Infrastructure plays an important role in economic development through its contributions to economic growth, poverty alleviation, and environmental sustainability (Gregory, 1997). However, in order to sustain the well being of local communities, a huge budget is required for infrastructure development. It has been found from many studies that budgeting processes have deficiency in ensuring effective and fair allocation of budgets (Tinakorn and Sussangkarn, 1996; UNESCAP, 2003). The planning processes therefore, have to be strengthened to ensure that scarce public funds are allocated effectively to those areas likely to have a maximum impact in terms of public service delivery. The allocation process must take into account past performances which could be used as an input for consideration, leading to better outcomes (World Bank, 2002).

The developmental plan of the local governments of Thailand, including TAO, follows the central government policy guidelines in defining its strategic plan, five-year plan, and annual plan. The strategic plan states in detail, the means of achieving the vision and mission whereas the five-year plan serves as a general framework within which the annual budgetary plan is prepared. Generally, TAO personnel plan expenditures based on their expected revenues from four main sources: taxes, central government subsidies, properties and enterprises, and loans. However, in reality, the value of collected taxes is overestimated and the transfer of supported revenue from the central government is greatly delayed. This results in an ineffective budgeting plan with uncertain expenditures (Suwanmala, 2002).

Top-down planning of a budget allocation process in rural infrastructure projects without the involvement of beneficiary communities and parties has often proven to be ineffective and an unnecessary waste of resources. Projects centered around the development of rural infrastructure ought to address the real needs of local people and optimize the use of local resources based on cost perspectives during the budget allocation system, all coupled with community participation (Donnges, 2003). Budget allocation planning, especially for project development, tends to be more effective if the local people or their representatives influence project selection by providing information and participating in the selection process. Participation via dialogues empowers people in budgetary decision-making and thus leads to fruitful outcomes of effective management of the local government (Cohen and Uphoff, 1980; Michener, 1998; Pongquan, 1992).

## Objectives

As discussed earlier, it is obvious that with the lack of systematic processes and procedures in planning, especially for infrastructure development, budget allocation would not be fair, justifiable, and transparent. This would inevitably lead to conflicts and debates amongst people in the community. An effective planning system needs to be developed within budget limits and this should be able to guide TAO management in justifying priorities and choice of necessary infrastructure projects to be invested in. Undoubtedly, effective planning for infrastructure development is considered to be one of the most important functions TAO management has to accomplish. This study, therefore, attempts to search for a systematic process facilitating effective planning. In order to accomplish the major objective, the following sub-objectives will be considered:

- To identify major problems causing ineffective planning with a focus on procedures and public participation perspectives.
- To restructure the existing planning process to show operational interactions amongst the responsible persons at various stages, such that problems can be identified, systematically captured, and set out for actual restructuring.
- To search for better processes able to eliminate problems and improve the planning procedure with the aim of meeting the TAO development mission by strengthening the participatory approach among the various parties in the community.

## Research Methodology

Improving the current planning system is the objective of this research and was reached in a stepwise manner as shown in Figure 1. Initially, the

factors contributing to effective infrastructure development were identified from literature review and thereafter, focus group sessions were conducted to identify and classify the significant root cause of such problems. Once the main factors and factor-related problems were identified and defined, the existing planning process was then analyzed and modeled in steps of occurrence, such that problems could be appropriately and accurately identified at each step. Finally, the means of improvement for the entire system was proposed in a similar step-wise format.

Since this study requires many types and forms of data to attain each research objective, various methods of data collection were used where appropriate. Case studies were used for in-depth investigation in order to determine the factors, problems and also the relationships amongst them (Gay, 1990). Also used were focus group sessions, an information collection approach in which group dynamics is used to explore ideas, thoughts and experiences on specific topics related to the study (Cooper and Schindler, 2001; Stewart and Shamdasani, 1990).

#### **Problem Identification and Classification**

Problem identification is one of the key components required to comprehensively capture the attributes of the TAO operating system and problems therein. These problems were captured during the focus group sessions and systematically structured thereafter. As suggested by Hudson et al. (1997) and World Bank (2002), these problems are categorized under two main categories: internal and external. The internal key parameters: operational, functional, and knowledge competency, are directly related to the TAO internal problems whereas the

external key parameters: public participation and related government agencies are directly related to the TAO external problems.

The findings show the diversity of problems, which are grouped into five key problems:

(1) The TAO operation procedures are most often not clearly defined. This obscures the main objective of the team and thus causes a lack of coordination amongst the members. In the long run, the objective cannot be reached. Various bottlenecks are faced along the course of operations and these include: insufficient land for construction despite adequate budget, delays in progress of work, limited time frames for urgent works, and errors arising from incomplete and inaccurate information. Consequently, these problems lead to ineffective operational processes.

(2) Roles, duties, and responsibilities of TAO personnel, which are also not well defined, make team members refrain from taking on difficult tasks but rather concentrate on influential and beneficial activities. This eventually leads to inefficiency, duplication of responsibilities and over working of TAO personnel.

(3) TAO personnel have lack of competency and have inadequate knowledge in technical and management know-how and government regulations. This results in low efficiency and effectiveness of operations, poor decision making in crucial activities, work elements not meeting standard specifications, and certain activities not being carried out due to legal doubts. Irrevocably, resulting outputs and outcomes do not meet the specified goal.

(4) Public participation of TAO stakeholders is not well organized and this causes conflict during the period of budget allocation during which their

contribution towards the decision of project selection is very low. Such projects do not usually conform to requirements of the community and thus, the project allocation equality in each area is not satisfied. This once again, leads to internal conflict and creation of social plights within the community.

(5) There seems to be a lack of contribution and cooperation from related government agencies especially when there is reference to approvals and support information from such agencies which hinders a smooth working process. In certain cases, some personnel have conflicts of interest underlying their authority. Members of the political circle also influence and force TAO personnel to favor and acknowledge their requirements. Thus, there is an ineffective and inefficient expenditure of the existing limited budget.

#### **Problem Examination**

The first step for problem examination is to identify the process and procedure in each stage of the existing planning of the infrastructure development system. Thereafter, the related problems are analyzed at each process and procedure in the planning system. These problems were identified during the case study. Each problem was analyzed carefully to understand its nature and source, and then recommendations for an appropriate prevention process were proposed. From this analysis, each problem was classified to its corresponding key parameters in order to have better understanding of the characteristics of the problems.

It is found that each process of the existing planning system has fundamental problems that can cause ineffectiveness for infrastructure project delivery. This research discovered that there are four vital concepts that should be established in order to improve the existing infrastructure development process

effectively. They are the quality management concept, knowledge competency concept, good governance concept, and public participation concept. This research discovered that utilizing these four concepts will help in solving the problems faced by TAOs and facilitate improvements in the planning system for infrastructure development.

The method to improve the effectiveness of the planning process was developed by grouping the key parameters and their specifically related problems into four key concepts. The knowledge competency concept is grouped from the technical competency parameter, management competency parameter, and government regulation parameter. The quality management concept is grouped from the cost control parameters, resources parameters, process parameters, operational parameters, functional parameters, responsiveness to the client parameters, political parameters, and cooperation strengthening parameters. The governance concept centers on governance related parameters from both the internal and external organization parameters and influencing parameters. Lastly, the public participation concept is grouped from the income distribution parameter, recognition of need parameter, ownership and trust parameter, communication parameter, and public involvement parameter.

#### **Development of Planning Improvement System**

The development of the planning improvement system, which used appropriate general approaches to search for effective solutions, was tested against the improvement objectives mentioned in the same context. The planning procedure, its problems, related factors, and key concepts affecting the improvement process, were used as a guideline to develop the improvement system. The improvement

system was modeled applying the concepts of quality management, knowledge competency, good governance and public participation.

The quality management system concept was considered essential to create a framework of references and procedures for every course of action such that the implementation of a certain process is consistently directed by the same information, methods, skills, and controls. The knowledge competency concept on the other hand, is useful to capture, codify, and share the knowledge held by people in organizations. It is considered advantageous if knowledge possessed by individual employees and especially those expert personnel or consultants is properly captured and managed such that this knowledge would be available to the organization at anytime. In the context of this study, knowledge competency was divided into three: technical, management, and government regulation competency. The third, the good governance concept, was considered important to ensure that the infrastructure development would be accountable, transparent, follow governing regulations, and incorporate public participation during its implementation. Lastly, the public participation concept is necessary in order to ensure that the infrastructure development addresses actual needs of the people and can optimize the use of local resources considering costs. It should also help to create an enabling regulatory framework and economic environment, which generates legitimate demands and monitors government policies and actions.

#### **Review and Updating of Planning Improvement System**

A focus group session was employed to check the pertinence of the improvement concept. Major stakeholders from twenty-four (24) TAO offices

emanating from various parts of the country were selected to review the planning improvement process. Such major stakeholders include the executive chairman and executive members, council chairman and vice chairman, permanent staff, village representatives, local leaders and the community organization leaders.

The process of the focus group session started with an introduction to the project and its benefit to the communities. This was followed by an illustration of the planning improvement system including detailed procedures of the entire process. This system shows the working process, stakeholder duties and responsibilities, knowledge competency, good governance and public participation checks. The stakeholders, standing as panelists, were encouraged by the moderator to analyze, discuss and express their perceptions on the tabled improvement process. They were given the freedom to provide recommendations and modifications until an acceptable improvement system, as shown in Figure 2, was reached. Suggestions raised were then effectively verified and further modified where necessary prior to its final adoption in the study. This assessment process was repeated at the selected TAO offices until all respondents were satisfied with the improvement system.

#### **Conclusion**

Decentralization in Thailand for the sub-district level had been initiated since 1992. Through this process, 6,744 TAOs were empowered as local government authorities. However, major stakeholders of the TAO, most from the rural areas, are unfamiliar with the bureaucratic system of operations. Infrastructure development, accessibility improvement

and effective utilization of allocated budget were noted as substantial key success elements in providing a better quality of life for society. Basically, five groups of problems were identified in the existing planning process: operational, functional, knowledge competency, public participation, and those related to government agencies. Therefore, an improved planning process that eliminates such problems and optimizes limited budgets is needed to improve the fulfillment of community satisfaction.

In order to solve or reduce the impact of the problems, restructuring the existing planning process is essential. Problem examination was conducted to find out the existing planning procedure, the problems in each procedure, and the corresponding key parameter for each problem. It was found that utilizing the four key concepts of quality management, knowledge competency, good governance, and public participation is critical to improve the existing planning process. Therefore, in problem examination, key parameters were grouped into their corresponding key concepts to effectively improve the planning process.

Quality management tends to be a major contributing factor for an improved planning process. The improvement system was developed based on the application of three key functions of any quality system namely, quality policy and concept, process and procedures manual, and work instruction. The TAO quality policy and concept consists of TAO duties and responsibilities, infrastructure development objectives, planning objectives and its general organization. The process and procedure manual is a step-by-step structured guideline of planning functions and the responsibilities of each major stakeholder. Work instruction on the other hand gives specific

details of the tasks of each process and procedure as well as specifications for measuring performance of activities.

The quality management concept governs the process factors, operational factors, functional factors, client response factors, cost control factors, resources factors, cooperation-strengthening factors and political factors. The 'process and procedure manual' controls the processes and operational factors, which proactively lessen the degree of problems therein. These problems arise as a result of ill defined and inappropriate methods and processes in the TAO environment. The procedure manual on its own controls functional factors as well as responsiveness to clients needs. These in turn solve problems related to TAO personnel's roles, duties, and responsibilities which are not well defined, nonconformity to duties of TAO personnel work, nonconformity of project selection to community needs, noncompliance to TAO annual plan and the inability of executives to generate budgets from related government agencies. Furthermore, the procedure manual can also control the cooperation-strengthening factor and political factor, which in turn solves problems related to the lack of mechanisms of cooperation among related government agencies and the influence of parliament members. The work instructions influence the cost control factor and resources factor which addresses the concerns of pre-estimates being made without using local unit prices, the wide gap between project budgets or design costs and actual construction costs and the inefficient utilization of local materials in construction. The knowledge competency concept was found to significantly affect planning effectiveness. It can be incorporated into the procedure manual as a validation



checklist to ensure that the procedures for an operation have been adhered to. The checklists were used not only in auditing the whole system itself but also the products of work. Knowledge competency was divided into three main functions: technical, management, and government regulations. The technical function is further divided into knowledge and skill as well as processes that include methods and related technologies as well as functional and technical literacy. The management function comprises human resources management, operations management, customer relationship management, leadership and public service management. Lastly, government regulation encompasses issues relating to the constitution, law and regulation. The knowledge competency concept can control the technical related factor and project scope factor, management competency factor and information factor, and government regulation competency factor. Technical knowledge competency controls technical related factors and project scope factors. It thus is required to solve technical related problems such as the allocation of budgets for construction projects with limited land, lack of site investigation data for pre-designs and pre-estimates and key personnel's lack of technical capability in design, estimation and supervision. Similarly, management knowledge competency can control management and information factors leading to the solution of management problems such as the lack of mission and specific goals to guide TAO work, insufficient information prior decision making, and key personnel's lack of planning, monitoring, controlling, and evaluating systems. Lastly, government regulations can control the related legal factors, which can solve government regulation competency problems like the key

personnel's lack of understanding of government regulations and the absence of consultation of rules and regulations prior to decision-making.

The good governance concept has quite a great significance, consequence and value at all stages of development at any government level in each country. This concept aims at promoting public sector transparency and accountability, effective public resources management and establishing a morally principled and legislative environment. The good governance concept can control governance related factors as well as other influencing factors. Transparency and accountability controls governance related factors which in return, solve problems of conflicting interest among executive members and related government agencies, TAO personnel's reluctance to public participation and the fatal effects of decision making based on personal interests of executive members. The moral principle and legislative aspect can control influencing factors, which solves the problems of local mafia and influences from higher local government authority members and parliament members.

The public participation concept adopted in this study was applied in its empirical context. The main purpose is to build a sense of belonging to the people in the community in order to encourage them to make suggestions and be involved in any decision-making activities. The World Bank (2002) stated government spending on unprofitable goods and service is a budget formulation and prioritization problem; resources failing to reach service providers or users is an expenditure tracking problems; weak incentives for effective services delivery is a monitoring problem; and inability of resources to deliver results and services to benefit the poor is a budget analysis



and review problem. This study also introduces the public participation component by specifying what, who and how to apply public involvement in attaining effectiveness. The public participation concept can control the public involvement factor, recognition of need factor, communication factor, ownership and trust factor and income distribution factor. The major elements of the what-who-how function can control public involvement factors causing problems such as unclear public participation process, disputes arising during the planning and budget allocation process and lack of public involvement. The “what” function controls ownership and trust factors, thus solving problems of TAO planning without appropriate public participation. The recognition of need factors can solve inappropriate project selection procedures. The income distribution factor can solve the issue of inattention to labor based technologies in construction. The “how” function controls the communication factor that solves problems relating to lack of public relations and poor information dissemination. The public involvement factors solve unclearly defined public participation procedures. The “who” function can define the stakeholder who will participate in a specific procedure.

## References

- Cohen, J.M. and Uphoff, N.T. 1980. Participation's Place in Rural Development: Seeking Clarity through Specificity. **World Development** 8: 213-235.
- Cooper, D.R. and Schindler, P.S. 2001. **Business Research Methods**. 7<sup>th</sup> ed. New York, US: McGraw-Hill.
- Donnges, C. 2003. **Improving Access in Rural Areas: Guidelines for Integrated Rural Accessibility Planning**. Bangkok, Thailand: International Labour Organization.
- Gay, L.R. 1990. **Educational Research: Competencies for Analysis and Application**. 3<sup>rd</sup> ed. New York, US: MacMillan Publishing Company.
- Gregory, I.K. 1997. Patterns of Metropolitan Development: What have We Learned. In: **World Bank Policy Research Paper 1841**. Washington DC, US.
- Hudson, W.R., Haas, R., and Uddin, W. 1997. **Infrastructure Management**. New York, US: McGraw-Hill.
- Michener, V.J. 1998. The Participatory Approach: Contradiction and Co-option in Burkina Faso. **World Development** 26(12): 2105-2118.
- Pongquan, S. 1992. **Participatory Development Activities at Local Level: Case Studies in Village of Central Thailand**. Asian Institute of Technology, Pathumthani, Thailand: Author.
- Serdar, Y. 2001. Governance, Decentralization and Reform in China, India, and Russia. **National Tax Journal** 54(4):853-860.
- Smoke, P. 2001. **Fiscal Decentralization in Developing Countries: A Review of Current Concepts and Practice, Democracy, Governance and Human Rights Program**. Switzerland: United Nations Research Institute for Social Development (UNRISD).
- Stewart, D.W. and Shamdasani, P.N. 1990. **Focus Groups: Theory and Practice**. US: Sage Publications.

Suwanmala, C. 2002. Fiscal Decentralization in Thailand. In: **Bali Inter-governmental Fiscal Reform Workshop**, pp. 1-18.

Thai Parliament. 1997. **Constitution of the Kingdom of Thailand 1997**. [online] [Cited 7 August 2006]. Available from: <http://www.parliament.go.th/files/library/b05.htm>.

Tinakorn, P. and Sussangkarn, C. 1996. Study of the Thai Government Budget Allocation: An International Comparison. **TDRI Quarterly Review** 11(2): 3-9.

United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). 2003. **Intercountry Exchange Programme on Successful Practices in Empowering Older Persons, Chiang Mai, Thailand, 10-12 November 2003**. [online] [Cited 7 August 2006]. Available from: <http://www.unescap.org/esid/psis/meetings/chiangmainov2003/report.asp>.

World Bank. 2002. **The Role and Effectiveness of Development Assistance: Lesson from World Bank Experience**. Washington DC., US: World Bank.

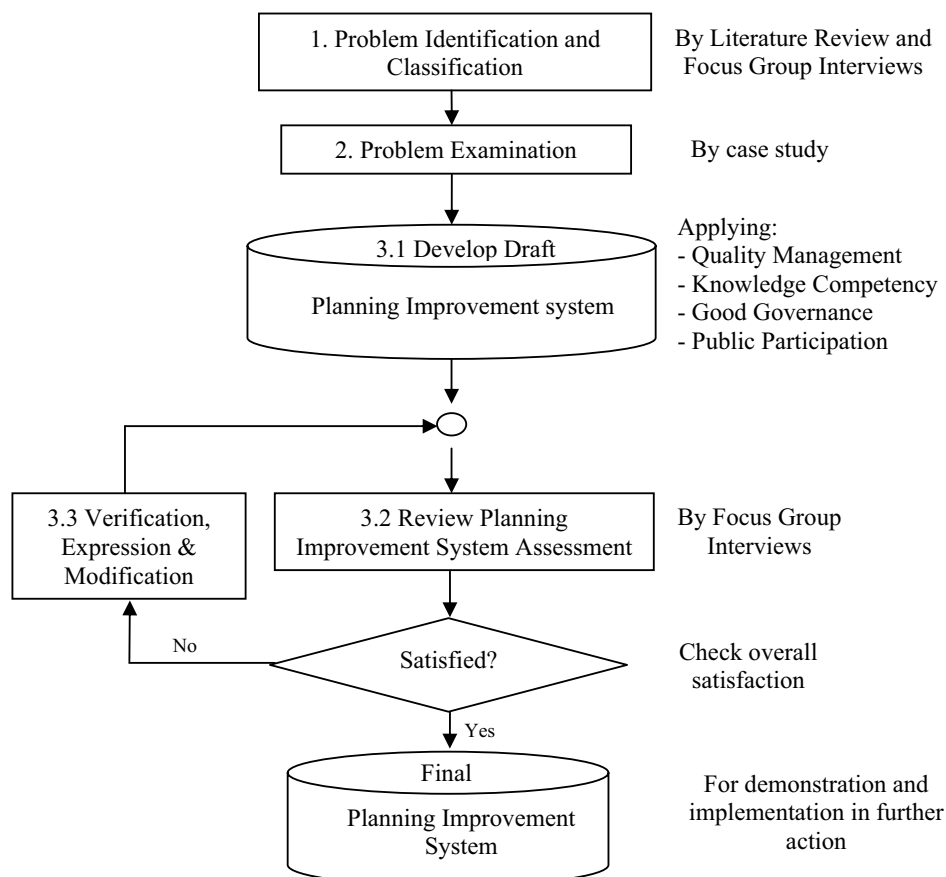


Figure 1. Research Methodology.

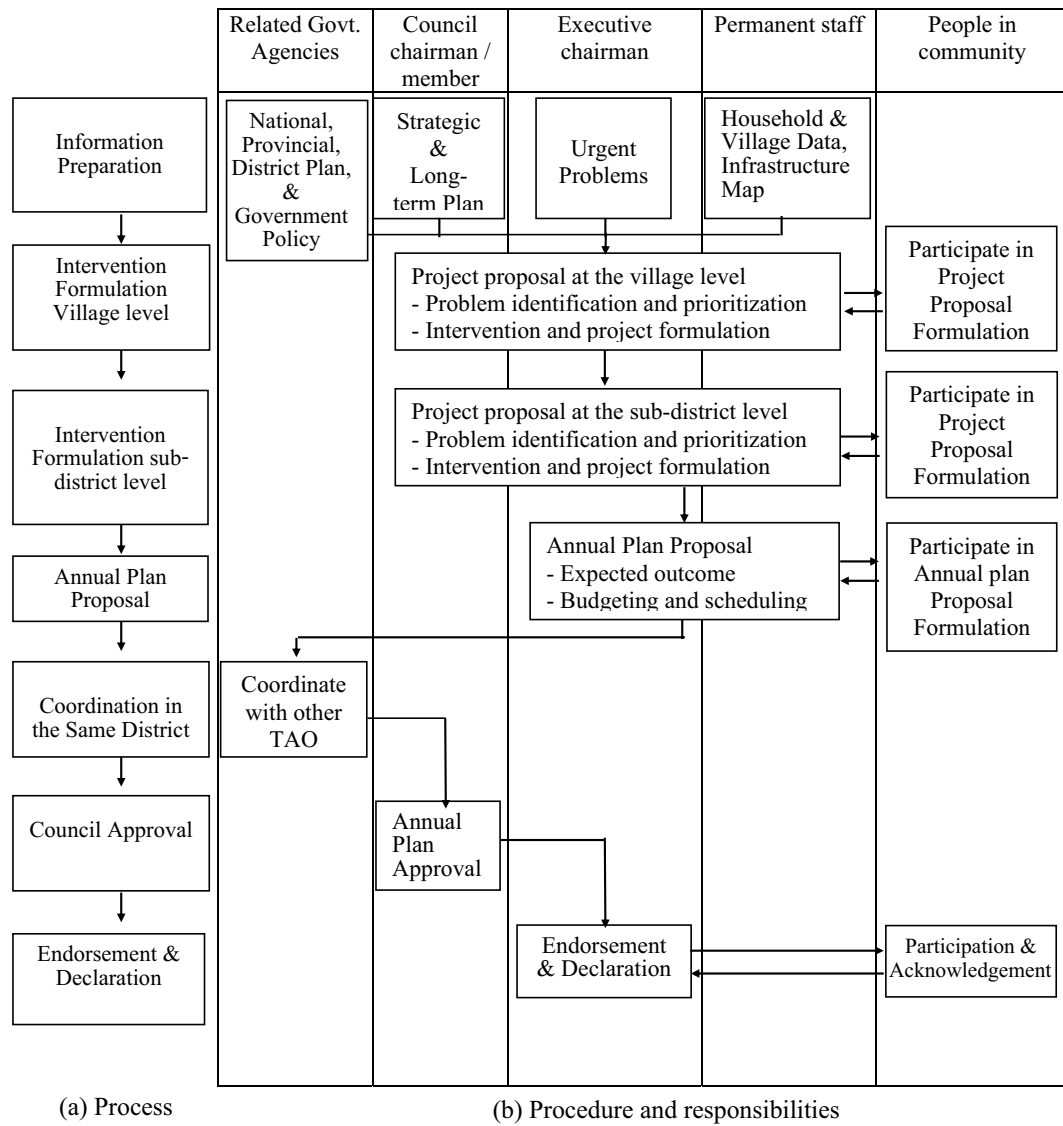


Figure 2. Planning Improvement System.