


**INTERGOVERNMENTAL NETWORKS IN THAILAND: THE
INITIATIVE IN LAMPANG, KANCHANABURI, AND
RAYONG PROVINCES**

Atchara Worasinchai


**A Dissertation Submitted in Partial
Fulfillment of the Requirements for the Degree of
Doctor of Philosophy (Development Management)
School of Public Administration
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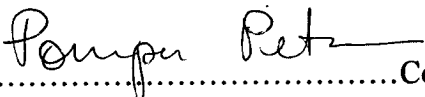
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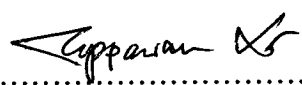
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ABSTRACT

Title of Dissertation	Intergovernmental Networks in Thailand: The Initiative in Lampang, Kanchanaburi, and Rayong Provinces
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One of the important roles of local government in Thailand is “public service.” In the past, local governments there were limited to this role, but now the central government has delegated more functions to the local governments, which has resulted in local governments having more responsibilities than before. Moreover, some of their duties have become more complicated and difficult to manage, e.g., environmental and infrastructural management. The public service of local government can be improved by using various means; the encouragement of local government cooperatives is the most famous means for improving local government functions and has been used in many countries such as Japan, France, and England. In Thailand, the local government cooperative has still not been seriously applied because of the legal limitations and unsupportive laws and regulations in self-initiated cooperatives and in budget utilization for all cooperative activities. Therefore, there is no official local government, self-initiated cooperative in Thailand at present. Nevertheless, the Department of Local Administration (DOLA), the Ministry of Interior, has cooperated with the Japan International Cooperation Agency (JICA) to conduct the Technical Cooperative Project on Capacity Building of Local Authorities through Local Government Cooperation and Local Public Standards with the support of Thammasat University. Three types of cooperative network (Pilot Cooperated

Project), Garbage Management, Disaster Prevention and Mitigation, and Infrastructure Management, were assigned to Lampang, Kanchanaburi, and Rayong provinces as the pilot sites by the DOLA.

These three Pilot Cooperated Projects (PCPs) were selected to study in this dissertation. Specifically, their background, characteristics, and nature were studied in deep detail. Moreover, the factors affecting the performance of the cooperative network were revealed by referencing both networking theories, Inter-Organizational Relationships (IORs), Transaction Cost Economics (TCE), the Social Science Perspective, Resource-Dependence Theory (RDT), Institutional Theory, and Leadership Theory, and through the direct interviewing of three provincial representatives. In addition, the pattern of interaction among the factors leading to the performance of the PCPs was discovered.

Under the limitations in law and specific types of PCP assignments assigned by the DOLA, there are six factors affecting the performance of the cooperative network that are common needs among local residents: attitude among local residents toward the cooperative network, level of local residents' participation, number of parties/actors involved in the cooperative network, orientation towards cooperative behavior, and leadership style. The match/mismatch between types of PCP assignment assigned by the DOLA and the common needs among local residents results in positive/negative attitudes among local residents toward the cooperative network. From result of this study, four parties/actors involved in the cooperative network and match between "democratic" leadership style and "cooperative" orientation towards cooperative behavior of local residents result the positive attitude among local residents toward the cooperative network. This positive attitude can be developed to high level of local residents' participation in the cooperative network activities, which consequent to performance of Pilot Cooperated Project.

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CHAPTER 1

INTRODUCTION

1.1 Statement and Significance of the Study

Inter-organizational networks are in vogue today. Interest in these networks has been steadily increasing across a wide variety of fields for several years. The interest in networks is especially strong in the field of economics and organization science. In the corporate world, network mapping is becoming a standard diagnostic and prescriptive tool. Furthermore, the Academy of Management Conference 2002 was dedicated to networks, as were several special issues of its journals (for a recent example see Academy of Management Journal, December, 2004).

The upsurge of interest in networks has come at a time in which environmental (or market) uncertainty is very high. Product ranges have become more diverse and new technological breakthroughs have given rise to many new technology-product-market combinations, resulting in markets characterized by high levels of dynamics and many changes. Simultaneously, the acceleration of technological development has forced firms to specialize and has subsequently led to an intensified division of activities between organizations. This specialization has resulted in firms not being able to generate all necessary knowledge and resources internally and, therefore, induces inter-organizational collaboration and networking. Networks, as new organizational forms, are on the one hand an answer to these dynamics that could be potential sources for radical change, but on the other hand, these networks are under the influence of these changes as well. Network analysis has been used extensively in the study of inter-organizational relations.

According to classical Transaction Cost Economic, TCE, see Williamson, (1975: 175), relations that entail specific investments create dependence and vulnerability to opportunistic “hold-up.” According to TCE, it is impossible to

reliably judge possible limits to other people's opportunism, and informal control or trust does not yield a reliable safeguard. If informal control or trust goes beyond calculative self-interest; it yields blind, unconditional trust, which is not wise and will not survive in markets (Williamson, 1979: 233-261). Since one has no reliable ex ante knowledge of whether, and when, opportunism will occur, one should employ safeguards against the hazard of opportunism. The safeguards are primarily based on exercising coercive power or "deterrence" (Shapiro et al., 1987: 623-658) hierarchical supervision, contract enforcement and monitoring, threat of "exit" (Hirschman, 1970: 100-105), damage of reputation, and impairment of hostages. These safeguards constitute what are call "formal control." They function as power mechanisms (Blau, 1964: 65). One definition of the power of actor A over B is "the amount of resistance on the part of B that can potentially be overcome by A" (Emerson, 1972: 75). It is exactly this use of "hard" control mechanisms that has inspired many of the more sociologically-oriented researchers to criticize TCE.

From a Social Science Perspective, many people take the view that informal control or trust is viable without necessarily becoming blind or unconditional, and can be an important element of informal "control" in the sense of the mitigation of relational risk (Macaulay, 1963: 55-67; Granovetter, 1973: 1360-1381; Bradach and Eccles, 1989: 97-118; Helper, 1990: 1-10; Hill, 1990: 500-513; Bromiley and Cummings, 1995: 219-247). Man is not only self-interested and opportunistic: in business common honesty and decency are also found. Informal control or trust can be based on social norms of reciprocity or obligation, personal bonding, or routinized behavior. This can yield voluntary compliance to an agreement that goes beyond self-interest. Because partners voluntarily refrain from opportunism, informal control or trust enables a leap beyond the expectation that reason and experience alone would warrant (Bradach and Eccles, 1989: 97-118), and thus beyond formal control mechanisms.

As Knights et al. (2001: 311-336) note, "a long tradition of management thought conceptualizes informal and formal control as opposing alternatives." In other words, to some extent informal and formal controls are substitutes. Low trust requires formal control. High trust allows for a limited extent of formal control. Formal control signals distrust and thereby evokes reciprocal distrust and formal control. However,

despite various attempts (Anderson and Narus, 1990: 42-58; Zaheer and Venkatraman, 1995: 373-392), there is no consistent empirical evidence that informal and formal control indeed substitute for each other. Informal and formal controls are found to be interrelated in various dynamic patterns (Larsson, 1992: 76-104). For example, legal regulation of inter-organizational relationship is an important precondition for trust as it makes the inter-organizational relationship more predictable (Luhmann, 1979).

Inter-relationships are very important for increasing efficiency and effectiveness in managing organization in both the public and private sectors. In other words, networking is one of the means to achieve better inter-relationship of public and private organizations. The relationship between informal and formal networks include both complementarities and substitutes. With strong formal networks, informal networks function as a complement to formal networks, while with absent or dysfunctional formal networks informal networks become a substitute (Narayan, 1999: 207-301). The informal network has been recognized as a very important factor in economic transactions. In a society without formal control (networks) such as law and order, the informal control (networks) can control trust through social appreciation and social punishment.

Today's managers are prone to engage in both informal and formal control activities with others in many different kinds of networks at both the organizational and individual level. There are many kinds of formal networks such as law and order and good governance, while the informal control networks imply, for example, trust, reciprocity, interpersonal networks, norms, social networks, friendship networks, informal networks, managerial networks and so on. One way for managers to efficiently perform their jobs is to network with other parties, both inside and outside their organization, who control or influence vital resources which are key to the survival of the organization. Managerial networking involves activities performed by managers in order to develop and maintain relationships with others inside and outside of their organizations. Networking helps managers to get things done effectively. Their relationship with others requires extensive care because it is an on-going process. The relationship must be well developed and maintained. In relationships of managers, they perform business, social, and information exchange

activities. Managerial networking includes both the formal and informal relationships of managers with others. In order to go beyond conceptual discussions of the influence of the interplay between informal and formal networks on organizational performance, empirical research is needed that will uncover the dynamics of these two control mechanisms. Such empirical research has been less until now. While the economic view tends to be over-rationalized, the sociological view is perhaps over-romanticized. A balance between the two perspectives is needed. This balance consequences the better performance of organization.

1.2 Objectives of the Study

The objectives of this study are to explain the effect that networking has on the performance of Local Governments that were selected by state, The Department of Local Administration, Ministry of Interior, to run the Pilot Cooperated Projects (PCPs) on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation. The factors those effect the performance of Local Government are found out by referring to the concept of “Inter-Organizational Relations,” “Transaction Cost Economic (TCE),” “Social Science Perspective,” “Resource-Dependence Theory,” “Institutional Theory” and “Leadership Theory.” Moreover, how each factor effect performance of Pilot Cooperated Projects (PCPs) are explored as well. The study will examine their relationship activities caused by networking by both the sets of open questions and through direct interview. The list of objectives are as follow.

1.2.1 To study the background, characteristics, and nature of cooperative network among local governments in Thailand based on 3 Pilot Cooperated Projects (PCPs).

1.2.2 To investigate how common needs among local residents, attitude among local residents towards the cooperative network, level of local residents’ participation, number of parties/actors involved in the cooperative network, orientation towards cooperative behavior, and leadership style of cooperative networks affect performance of PCPs.

1.2.3 To study the pattern of interaction among factors leading to performance of PCPs.

1.3 Scope of the Study

In this dissertation, three provinces, Lampang, Kanchanaburi, and Rayong selected by The Department of Local Administration, Ministry of Interior to join the Pilot Cooperated Projects (PCPs), are studied. In the Pilot Cooperated Projects, the Municipalities and the Tambon Administrative Organization in each province joined the project. The Disaster Prevention and Mitigation project in Kanchanaburi province consists 4 Local Governments, Kanchanaburi Town Municipality, Pak Praek TAO, Ko Samrong TAO, and Ta-Makam TAO. The Infrastructure Management project in Rayong province consists 8 Local Governments, Bann Pluakdaeng Tambon Municipality, Jom Pol Choa Praya Tambon Municipality, Pluakdaeng TAO, Mab Yang Porn TAO, Mae Nam Koo TAO, Ta Sit TAO, Nhong Rai TAO, and Lahan TAO. The Garbage Management project in Lampang province consists 4 Local Governments, Ko Kha Tambon Municipality, Sala Tambon Municipality, Ta Pa TAO, and Ko Kha TAO. Networking is the selected means used to reflect the Inter-Organizational Relationships of 3 provinces. The Local Government, Municipalities, and Tambon Administrative Organization, relationship activities caused by networking and other factors such as the laws & regulations, common needs of local people, local people attitude, number of members in the Pilot Cooperated Project, leadership, local people culture, local people participation, and homogeneity of local people that have an effect on the Pilot Cooperated Projects (PCPs) performance are studied. The representatives of all LGOs in 3 Pilot Cooperated Projects (PCPs), Disaster Prevention and Mitigation in Kanchanaburi province, Infrastructure Management in Pluak Dang district, Rayong province, and Garbage Management in Koh Kha, Lampang province, are directly interviewed.

1.4 Definition of Technical Terms

Cooperative Networks: The pilot cooperated project (PCPs)

PCPs: The Pilot Cooperated Project initiated by The Department of Local Administration including of 3 projects, Garbage Management in Koh Kha, Lampang, Disaster Prevention and Mitigation in Kanchanaburi, and Infrastructure Management in Pluak Dang district, Rayong

DOLA: The Department of Local Administration, Ministry of Interior

LGOs: Local Government Organization

Local Government Organizations: Municipalities, Tambon Administrative Organizations who were selected by DOLA to run the Pilot Cooperated Projects.

Municipality: An administrative entity composed of a clearly-defined territory and its population and commonly denotes a city, town, or village, or a small grouping of them. A municipality is typically governed by a mayor and a city council or municipal council.

Tambon Administrative Organization: A local government with an elected Tambon Council. Depending on the size and tax income, a Tambon may either be administrated by the Tambon Administrative Organization (TAO) or the Tambon Council (TC).

Network Center: The center of PCPs. The location of the Network Center is the same place that the director works.

Network Center Committee: They are chosen from local executives, chief administrators, and representatives of council from all LGOs members.

Network Center Sub-Committees: Those selected by the Network Center committees.

Law and Regulation of the Country: The law and regulation of Thailand Country about the cooperation organization of Local Government Organizations.

Common Needs among Local Residents: The same requirement of local residents to solve the specific local problem.

Attitude among Local Residents towards the Cooperative Network: Positive or negative view of local residents about the cooperative network assigned by DOLA.

Level of Local Resident Participation: The level of cooperative network activities sharing of local residents.

Number of Parties/Actors Involved in the Cooperative Network: The number of member LGOs who involved in the PCPs.

Orientation towards Cooperative Behavior: The cooperative behavior tendency of local residents. There are two tendencies of cooperative behavior, cooperative and non-cooperative.

Cooperative: The supportive behavior in cooperative towards local residents.

Non-Cooperative: The unsupportive behavior in cooperative towards local residents.

Leadership Style: The characteristic of chairman of Network Center.

Autocratic Leader: A person that commands and expects follower. The leader leads by the ability to withhold or give rewards and punishments

Democratic Leader: The leader consults the group on proposed actions and decisions. The leader also encourages participation from the group.

Free Reign Leader: The leader uses very little power, thus giving the followers independence.

LGOs: Local Government Organization

Local Government Organization: Municipalities, Tambon Administrative Organization

Municipality: An administrative entity composed of a clearly-defined territory and its population and commonly denotes a city, town, or village, or a small grouping of them. A municipality is typically governed by a mayor and a city council or municipal council.

Tambon Administrative Organization: A local government with an elected Tambon Council. Depending on the size and tax income, a Tambon may either be administrated by the Tambon Administrative Organization (TAO) or the Tambon Council (TC).

CHAPTER 2

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Local Government Municipality: Tambon Administrative Organization

2.1.1 History of Thailand Local Government

Local Government was comprised of both regular territorial administrative units and self-governing bodies. Local autonomy is limited, however, by the high degree of centralization of power. The Ministry of Interior controls the policy, personnel, and finances of the local units at the provincial and district levels. Field officials from the ministry as well as other central ministries constitute the majority of administrators at local levels.

In 1987 there were seventy-three provinces (Changwat), including the metropolitan area of Bangkok, which had provincial status. The provinces are grouped into nine regions or administrative purposes. As of 1984, the provinces were divided into 642 districts (Amphoe), 78 subdistricts (King Amphoe), 7,236 communes (Tambon), 55,746 villages (Muban), 123 municipalities (Tesaban), and 729 sanitation districts (Sukhaphiban).

The province was under a governor (Phuwarachakan), who was assisted by one or more deputy governors, an assistant governor, and officials from various central ministries, which, except for the Ministry of Foreign Affairs, maintained the field staff members in the provinces and district. The governor supervised the overall administration of the province, maintained law and order, and coordinated the work of the ministerial field staff members. These field officials carried out the policies and programs of their respective ministries as line administrators and also served as technical advisers to the governor. Although these officials were responsible to the governor in theory, in practice they reported to their own ministries in Bangkok and

maintained communication with other province-level and district-level field staff members.

The governor also was responsible for district and municipal administration, presiding over a provincial council composed of senior officials from the central ministries. The council, which served in an advisory capacity, met once a month to transmit central government directives to the district administrators. Apart from the council, an elected provincial assembly exercised limited legislative oversight over provincial affairs.

District administration was under the charge of a district officer (Nai Amphor), who was appointed by the minister of interior and reported to the provincial governor. Larger districts were divided into two or more subdistricts, each under an assistant district officer. The district or the subdistrict was usually the only point of contact between the central authority and the populace; the central government had no appointed civil service officials below this level.

The district officer's duties in overseeing the laws and policies of the central government were extensive. He supervised the collection of taxes, kept basic registers and vital statistics, registered schoolchildren and aliens, administered local elections at the community and village levels, and coordinated the activities of field officials from Bangkok. Additionally, the district officer convened monthly meetings of the headmen of the communes and villages to inform them of government policies and to instruct them on the implementation of these policies. As the chief magistrate of the district, he also was responsible for arbitration of land disputes; many villagers referred these disputes to the district officer rather than to a regular court.

The commune was the next level below the district. An average of nine contiguous, natural villages were grouped into one commune, whose residents elected a headman (Kamnan) from among the village headmen (Phuyaiban) within the commune. The commune chief was not a regular government official, but because of his semiofficial status, he was confirmed in office by the provincial governor. He also was entitled to wear an official uniform and receive a monthly stipend. Assisted by a small locally-recruited staff, the Kamnan recorded vital statistics, helped the district officer collect taxes, supervised the work of village headmen, and submitted periodic reports to the district officer.

Below the commune level was the village government. Each village elected a headman, who generally served as the middleman between villagers and the district administration. The headman's other duties included attending meetings at the district headquarters, keeping village records, arbitrating minor civil disputes, and serving as village peace officer. Generally the headman served five years or longer and received a monthly stipend. In the 1980s, the importance of a village headman seemed to be declining as the authority of the central government expanded steadily through the provincial and local administration.

2.1.2 Municipality

The municipalities in Thailand included Bangkok, seventy-two cities serving as provincial capitals, and some large district towns. According to the 1980 census, municipalities had a combined population of 7.6 million, or about 17 percent of the national total. The municipalities consisted of communes, towns, and cities, depending on the population. Municipal residents elected mayors and twelve to twenty-four municipal assemblymen; the assemblymen chose two to four councilors from among their number, who together with the mayors made up the executive councils.

The municipal authorities are self-governing. The Municipal is an administrative arm of the central and provincial authorities. The Municipal is autonomous and has self budgeting for managing their areas. The mayors are elected by the population in the areas. There are several objectives if Municipality is found, for example, the management efficiency of local area can increase, the budgeting management of local area is more efficient, the management duties of central government can be relieved, and the local people are trained in the democratic system. The main responsibilities of Municipalities are to solve local problems, develop controlled areas to be more efficiency, etc.

2.1.3 Tambon Administrative Organization

The Tambon is a Local Government unit in Thailand. Below district (Amphoe) and province (Changwat), Tambons form the third administrative subdivision level. As of the 2000 census there were 7254 Tambons, not including the

154 khwaeng of Bangkok, which are set at the same administrative level; thus every district contains 8-10 Tambons. Tambon is usually translated as “commune” or “subdistrict” in English; the latter is also the recommended translation, although it is also often used as the translation for King Amphoe. Tambons are further subdivided into 69,307 villages (Muban), about 10 per Tambon. Tambons within cities or towns are not subdivision into villages, but into communities (Chumchon).

Tambons as a subdivision are quite old already. They were the second-level subdivision of the area administrated by a provincial town in the 19th century. The governor of the province was supposed to appoint a commune elder (kamnan or phan). Phan also means 1000, which refers to the fact that a Tambon was supposed to have about 1000 able-bodied men (Phan can be referred to a military title, which is a Tambon Governor).

In the administrative reforms that began in 1892 under Prince Damrong Rajanubhab, the first Thai Minister of Interior, the three levels of subdivision of provinces were continued, i.e. starting from district to Tambon to the lowest level called Muban.

With the Tambon Council and Tambon Administrative Authority Act BE 2537 (1994) and later by the constitution of 1997, the Tambons were decentralized into Local Government units with an elected Tambon Council. Depending on the size and tax income, a Tambon may either be administrated by a Tambon/Commune/Subdistrict Administrative Organization (TAO; there are various names in English. องค์การบริหารส่วนตำบล) or a Tambon Council (TC, สภาตำบล). The TAO or TC consists of two representatives from each Muban in the Tambon. From the group a leader is chosen, who in practice often, but not always, happens to be the Kamnan. The Tambon area which belongs to a municipality (Thesaban) is administrated by the city council. In case only a part is within a municipality, the remaining part is administrated by a TAO. Adjoining Tambons of a single Amphoe can also have a joint TAO responsible for more than one Tambon.

2.2 Pilot Cooperated Projects (PCPs)

The important role of Local Government in Thailand is “public service.” In the past, Local Governments in Thailand were limited in this role but now the central government has delegated more functions to Local Governments, which has resulted in Local Governments having more responsibilities than before. Moreover, some of their duties have become more complicated and difficult to manage, e.g., environmental and educational management.

According to the higher responsibility of Local Government, Local Governments themselves need to improve their public service to be more efficient than before. The Local Government needs to review often and evaluate their performance to see if they have able to give the public service good enough service. If not, they need to improve their performance to reach the standard of public service.

The public service of Local Government can be improved by using various means. The encouragement of Local Government cooperatives is the most famous means of improvement used in many countries such as Japan, France, and England. For Thailand, the Local Government cooperative is still not seriously applied because of limitations in law and lack of training.

Nowadays, there are various public services of Local Government; however, service quality is different in different Local Governments. Most Local Governments still can not do their tasks efficiently. From this reason, the Department of Local Administration, Ministry of Interior, has cooperated with the Japan International Cooperation Agency, JICA, to conduct a Local Government performance improvement project by referencing Local Government Cooperative Standards with the support of Thammasat University. Three Pilot Cooperated Projects (PCPs), 1. Fire Management held in Kanchanaburi province, 2. Basic Structure Management held in Rayong province, and 3. Garbage Management held in Lampang province, were first to be implemented.

The first project, Fire Management, was run by a cooperative of four Local Governments, e.g., Kanchanaburi Town Municipality, the Ta-Makam Tambon Administrative Organization, the Pak-Prak Tambon Administrative Organization, and the Ko-Somrong Tambon Administrative Organization. The second project, Basic

Structure management, was run by a cooperative of eight Local Governments, e.g., Plouk-Dang Municipality, Jompon-Jowpaya Municipality, the Plouk-Dang Tambon Administrative Organization, the Mam-YangPorn Tambon Administrative Organization, the Ta-Sid Tambon Administrative Organization, the Lahan Tambon Administrative Organization, the Maenamkhu Tambon Administrative Organization, and the Nong-rai Tambon Administrative Organization. The last project, Garbage Management, was run by a cooperative of four Local Governments, e.g., Koh-Kha Municipality, the Koh-Kha Tambon Administrative Organization, the Ta-Pa Tambon Administrative Organization, and the Sa-la Tambon Administrative Organization.

2.3 Inter-Organizational Relationship Concept

2.3.1 Relationship Structure

Inconsistency in the definitions and use of relationship terms has created problems for the interpretation and replication of research findings. One reason for this may be that researchers are not consistent in their selection of characteristics that differentiate and lead to different relationship structures. Personal relationships are structured based on the needs and levels of attraction or intimacy between two or more people. The attributes of trust and commitment often describe the intimacy or level of closeness of the relationship as opposed to the type of relationship (e.g., friendship, marriage). Analogous to this, the structure of Inter-Organizational Relationship is composed of relationship type.

2.3.2 Relationship Type

Types of Inter-Organizational Relationship have historically been categorized by where they fall in the governance spectrum. The channels literature was the first to propose a range of relationships from arms length transactions (or market governance) to vertical integration (or hierarchical governance). More recently it has been recognized that integration involving more than one firm may be more appropriately placed at the latter end of this range since one firm cannot effectively accomplish the control and management of the whole channel (or supply chain). Several authors have since acknowledged these two end points, arms length and integration, and

placed inter-firm cooperative relationships (types of relationship where there is cooperation between or among the firms involved) in the middle (Heide, 1994: 71-85).

The different cooperative relationships have been identified as partnerships, alliances, joint ventures, network organizations, franchises, license agreement, contractual relationships, service agreements, and administered relationships, to name a few. Some authors have proposed where these relationships fall in relation to each other in a range between types of arms length transaction and vertical integration.

2.4 Transaction Cost Economic (TCE)

In Transaction Cost Economic, TCE, governance is based on private and legal ordering mechanisms (safeguards) to protect against opportunistic behavior (Williamson, 1985: 200-204), in what we called “formal control.” TCE aims to find the most efficient form of governance, in a trade-off between different instruments of formal control, depending on the degree of asset specificity, uncertainty and transaction frequency.

Classical contract theory is closely related, by aiming at the optimal contract, which is the contract with the lowest transaction costs relative to outcome efficiency. In this theory, a complete contract is defined as an agreement between two or more parties in writing that is perceived, or intended, to be legally binding (Lyons and Mehta, 1997: 250-260). Whereas an agreement may take a variety of forms, written or verbal, implicit or explicit, a formal contract refers to such an agreement in tightly-written legal forms (Lyons and Mehta, 1997: 239-241). A complete contract is assumed to produce efficient outcomes, but there are costs of the process of drafting, negotiating, and safeguarding an agreement. Confidence in the contract is assumed, as long as the contract is based on verifiable information, on the implicit assumption that the law provides a reliable and costless enforcement mechanism (Lyon and Mehta, 1997: 245-250).

In reality, it may not always be possible or desirable to specify or enforce a complete contract. It may be very costly to do so because of the costs of set-up and monitoring and the costs and risks of litigation. The plaintiff may have to deal with

his opponent again in the future, and taking him or her to court would seriously jeopardize that. Litigation may affect reputation, and thereby jeopardize potential future relations with others. Among social scientists the actual use of legal sanction is generally seen as incompatible with a trust relationship. As Luhman (1979: 340) has already noted, legal norms do not fulfill their social function by actually being mobilized, rather, they direct the expectations of social actors to certain routes of behavior, long before sanctions are seriously considered. There is also a more technical obstacle to full enforcement of contracts. In “relational contracting,” contracts contain non-legal obstacles or even poorly specified intentions, promises, conditions and the like, which are supported by non-legal sanctions (threat of exit, hold-up, reputation damage, impairment of hostages). Deakin and Wilkinson (1997: 250) note that “Such arrangements may easily be misinterpreted by the courts, which do not have access to the specialized knowledge or assumptions shared by the parties.” In sum, the degree of contract enforcement depends on the future perspectives of the relationship, which depends on the expected or intended durability of relations, the importance of reputation mechanisms, and the degree to which contracts include legally non-enforceable elements.

As a result, the role and enforcement of contracts depend on the institutional context that enables and constrains instruments of governance. Institutional environments differ in the intended duration and stability of IORs, the role of reputation, the inclusion of non-legal elements in “relational contracting,” and the gaps that are left in incomplete contracts. In terms of a general characterization, they depend on whether IORs are perceived primarily from a perspective of “voice” or of “exit”. Bachman (2001: 347-355) has described the difference between the British and German socio-economic system. The continental European system is characterized by a co-operative mechanism to solve the problem of coordinating social actors’ expectations and interactions. The German business environment is characterized by tight regulations and a strong institutional order. The British system, by contrast, is characterized by a patchy and incoherent institutional environment with a relatively weak form of embeddedness of social interactions in these structures (Bachman, 2001: 337-339). This has implications for the use of trust as well as formal control. In Anglo-Saxon countries, agreements tend to be laid down in detailed formal contracts

in which each side tries to force its conditions upon the other (Sako, 1992: 501). In the German context, system trust exists by reference to the institutional framework of norms of behavior, expected duration and intensity of relations, allegiance to professional and industry associations, and at the personal level businessmen trust each other as representatives of their organizations, which are embedded in highly-regulated, socio-economic systems.

An incomplete contract is defined as an agreement that goes beyond what is verifiable, for example with agreements on a quality level that cannot be verified (Chen, 2000: 209-222). In an incomplete contract the gaps in the agreement are filled as contingencies arise, offering less certainty but more flexibility in the execution of the agreement. In case of trouble, fewer legal safeguards exist to fall back upon. However, elements of a formal agreement that is not legally enforceable, as part of relational contracting, can still yield elements of formal control by indicating limits of acceptability, with an underlying threat of non-legal retribution such as retaliatory opportunism (“tit for tat”), suspending collaboration, breaking the relation, damaging reputation, or sacrificing hostages. Such formal elements can be of different types, and can be more or less extensive, depending on the role, the extent, and the basis of trust.

2.5 Social Science Perspective

From the Social Science Perspective, scholars argue that while using power may be effective in some cases, it also yields disadvantages in unwanted side effects, such as evoking conflict (Gaski, 1984: 9-19; Hunt and Nevin, 1974: 186-189) and defensive behavior (Zand, 1972: 229-239). As noted by Deutsch (1973: 88), “Without the other’s trust as an asset, power is essentially limited to the coercive and ecological (i.e. conditional) types, the types that require and consume most in the way of physical and economic resource.” Thus, sociological theory proposes trust as an alternative governance mechanism. Trust is argued to have positive side-effects on IOR development. People who trust each other will expose themselves more easily and are more receptive to other’s ideas, accept more interdependence, and have less need to impose control on others (Zand, 1972: 229-239). As a result, problems are

more likely to be identified, openly examined, and solutions are more likely to be appropriate and creative. In short: trust yields efficient outcomes at lower costs. Some authors even claim that use of formal control creates a self-fulfilling prophecy because it signals distrust. This will evoke opportunism and lack of loyalty, which in turn requires more control (Ghoshal and Moran, 1996: 13-25). Besides these negative influences on IOR development, traditional TCE safeguards may also be very costly to use and can impose a straightjacket constraining the scope for unpredictable actions in the relation that one needs to maintain, especially when the aim of the relationship is innovation (Nooteboom, 1998: 45).

Perspectives on non-opportunistic behavior are also found in the contract literature. Chen (2000: 225-232) states in a study of optimal contracts, that the basic assumption that human beings have a tendency to keep promises is closer to reality than that of opportunism. Macneil (1980: 202) explicitly calls attention to the social aspects that accompany business transactions and contracts. He claims that contracts, as presumed in classical and neo-classical economics, actually do not exist because they are cut loose from their social context and meaning. The economy is embedded in society as a whole and discrete transactions are inconceivable in this world-view since "...contract between totally isolated, utility maximizing individuals is not contract, but war" (Macneil, 1980: 205).

Although Williamson relies upon the contractual distinctions made by Macneil, his transaction cost framework does not include social virtues. As already indicated, Williamson (1979: 249-251) argues that if trust goes beyond calculative self-interest it inevitably yields blind trust, which is unwise and will not survive in competition. This creates a challenge. Most people would agree that blind, unconditional trust is unwise. Then, how can trust be real and relevant without inevitably leading to blind, unconditional trust? Pettit (1995: 318-329) offers an answer by stating that trust can be real and yet take into account limits of trustworthiness. Such limits represent a partner's resistance to opportunistic temptations or pressures. Among firms, such pressures depend, among other things, on the intensity of competition. While people and organizational culture may be oriented towards trustworthiness, firms may be forced to be opportunistic for sheer survival. However, within those limits one trusts, and opportunities and hazards of

opportunism are relegated to “subsidiary awareness” (Polanyi, 1962: 310-317), i.e., in a trusting relation one is not permanently alert to opportunities and risks of opportunism. However, when conditions arise that exceed the perceived limits of a partner’s resistance to temptations or pressures of opportunism, or when unexpected behavior is observed, attention to hazards of opportunism is triggered and shifted from subsidiary to focal awareness (Nooteboom, 1998: 48).

According to a similar line of argument, trust is not blind because although discrete transactions may be displaced by relationships “with a vast array of norms beyond those centered on the exchange and its immediate processes,” people still reason according to the “laws” of discrete exchange (Macneil, 1980: 170). In other words, actors think both discretely and relationally; they are at the same time selfish individuals and integral parts of a social unity (Macneil, 1980). Therefore one may expect that formal contracts reflect the same interconnectedness between (intentionally) rational economic thinking and relational reasoning and inclinations between people. This entails the idea that (intentionally) rational economic thinking and relational reasoning and inclinations might go hand in hand.

2.6 Networking Theories

2.6.1 Resource Dependence Theory

According to the resource dependence perspective, firms do not merely respond to external constraint and control through compliance to environmental demands. Rather, a variety of strategies may be undertaken to somehow alter the situation confronting the organization to make compliance less necessary. The argument is that the managers of organizations seek to maintain discretion over the organization’s activities, in part to maintain their own power and discretion, and in part to permit adaptation subsequently as new contingencies arise. An organization already tightly constrained by its environment has limited degrees of freedom left if and when new demands arise. Thus, departing somewhat from the population ecology perspective, the resource dependence view argues that organizations are constrained by their environment but also undertake actions that alter those environments.

The empirical research conducted to date has examined a number of organizational strategies for either establishing a negotiated environment or altering the pattern of interdependence confronting the organization. In general, two types of interdependence and their effects on organizational strategies have been considered: (1) competitive or commensalistic interdependence and (2) symbiotic interdependence, such as that found between buyers and sellers of a product or service. With regard to competitive interdependence, Salancik and Pfeffer (1977: 3-21) have argued that the amount of inter-organizational linkage activity would follow an invert U-shaped relationship with industry concentration, being largest when concentration is intermediate and being smallest when concentration is either very low or very high.

Inter-firm coordination can also be accomplished through the movement of executives across competitive firms within the same industry. The movement of personnel is an important mechanism for tying parts of a single organization together through the development of shared experiences (Edstrom and Galbraith, 1977: 250). In an analogous fashion, the movement of personnel within an industry can tie the organization together by the transmission of a common culture and set of understandings about the industry.

Burt, Christman and Kilbrun (1980: 830) used network analysis to develop measures for the relative autonomy of industrial sector. Burt identified two aspects of autonomy in relational (transactional) networks:

One aspect of autonomy concerns the relations among actors jointly occupying a status in a system. The actors will be able to escape the constraints of supply and demand imposed by actors in other positions and, accordingly, will be “autonomous” within their system, to the extent that among persons, or corporate actors, occupying the position there exists an oligopoly or, in the extreme of centralization, a monopoly. (Burt, Christman and Kilbrun 1980: 835)

A second aspect of autonomy concerns the manner in which actors jointly occupying a status are related to actors occupying other statuses

in their system. Actors will be able to balance demands from other actors and, accordingly, will be “autonomous” within their system, to the extent that the pattern of relations defining position J ensures high competition among those actors who interact with the occupants of position J. A measure of autonomy via group-affiliation must consider two things: the extent to which actors occupying a status have diversified relations with other statuses, and the extent to which they have relations only with statuses that are too poorly organized to make collective demands. (Burt, Christman and Kilbrun, 1980: 840)

Burt has argued that autonomy considerations should help to explain both variations in industry profitability and in the pattern of cooptive relations. He found support for autonomy explaining profitability and for explaining patterns of merger activity. Burt, Christman and Kilburn (1980: 821-830) found evidence that the structure of the transactional market could predict the use of interlocking directorates as well.

2.6.2 Institutional Theory

2.6.2.1 Institutional Pressure

The institutional perspective argues that firms are subject to institutional pressure within an institutional field. An institutional field has been defined as “those organizations that constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products” (DiMaggio & Powel, 1983: 151). Clearly, institutional fields are complex and are comprised of a vast array of constituents with their own culture and interests (Scott, 2001: 425-430). While institutional fields have traditionally been defined as firms within common industries or that sell common products, institutional fields can also be formed around common issues (Hoffman, 1999: 360-371).

Constituents within the market and non-market environments exert institutional pressure on firms. Firms engage with constituents in their market environment (e.g., customers, suppliers) via economic transactions, while constituents

in firms' non-market environment (e.g., regulators, environmental organizations) are interested in social, political, and legal issues.

Non-market and market actors frame environmental management issues differently. For example, constitution of the market environment tend to view environmental issues primarily within the rubric of business performance, focusing on their cost and efficiency implications. On the other hand, non-market actors such as regulators and activist groups typically view environmental issues as negative externalities, and often operate via the legal system and the mass media (e.g., as a court of public opinion). These diverse constituents are also likely to disagree about the legitimacy of a management practice before it becomes institutionalized, which occurs when it takes on a rule-like status in social thought and action (Meyer & Rowan, 1977: 358-63). Market and non-market constituents are thus quite likely to differ both in their interpretation of industrial environmental issues and in their perceptions of which management practices constitutes legitimate responses.

2.6.2.2 Organizational Responses to Institutional Pressures

While there is a wide range of voluntary environmental strategies, Most organizations in Thailand focus on ISO 14001 and government-initiated voluntary environmental programs because they are among the most commonly adopted by firms across a variety of industries (Dietz & Stern, 2002: 435-450). The main difference between these practices is that governments initiate and are often involved in the implementation of voluntary governments programs, whereas governments are not directly involved in ISO 14001. Neither of these programs is required by law and there is no consensus about their effect on environmental performance. While these programs may be desirable either from a market or non-market perspective, they could be viewed as undesirable from the opposite perspective. In other words, because these practices are not yet institutionalized, they may be contested by some constituents of the field. Nonetheless, as Oliver (1991: 145-152) has noted, "from an institutional perspective...the appearance rather than the fact of conformity is often presumed to be sufficient for the attainment of legitimacy." Thus adopting environmental management practices—regardless of their immediate performance implications—may be particularly effective in enhancing organization legitimacy by helping to alleviate constituents' about environmental performance. Bansal and

Clelland (2004: 93-103) have shown how firms can partially manage the perception of their legitimacy by conveying information regarding changes in products or processes to demonstrate commitment to the environment. Studies in other domains have found that firms may engage in symbolic management as a means of responding to institutional pressure (e.g., Westphal & Zajac, 1992: 148-153).

Adoption of the ISO 14001 Environmental Management System (EMS) Standard is the first environmental management practice organizations in Thailand focused on. Issued by the International Organization for Standardization, this international standard characterizes the essential elements of an EMS and provides a framework for organizations seeking to reduce their environmental impacts beyond regulatory requirements. The standard's underlying logic is that organizations can reduce their environmental impacts if they manage environmental issues systematically, as doing so enables them to identify and focus their efforts on the particular aspects of production processes that result in the most environmental harm (Coglianese & Nash, 2001: 368-376). The ISO 14001 standard requires adopting organizations to create environmental policy, set objectives and targets, implement a program to achieve those objectives, monitor and measure the program's effectiveness, correct problems, and review the system to improve the EMS. ISO 14001 does not require any particular environmental performance level or improvement rate— other than a commitment to comply with applicable regulations—and thus environmental performance is not a criterion in the certification process.

Over 90,000 facilities around the world have adopted the ISO 14001 standard, largely in response to institutional pressures from market constituents. Although ISO 14001 was designed as a voluntary standard, some organizations may have adopted the standard due to their sensitivity to coercive pressure from their customers (Darnall & Edwards, forthcoming). In particular, many automakers and large electronics firms in the United States are requiring or strongly encouraging their suppliers to adopt the standard. In addition, many firms in Asia are adopting the standard, anticipating that their European-based customers will require this of their suppliers. In addition, some adoption appears to be motivated by firms' vulnerability to mimetic pressure, as firms imitate the behavior of other organizations that are tied

to them through networks (Guler et al., 2002: 227-232). In this case, organizations that perceive that a large number of their competitors have adopted ISO 14001 are more likely to adopt the standard.

2.6.3 Inter-Organizational Relations (IORs)

Not surprisingly, most of these drivers can be found in the inter-organizational literature as antecedent to relationships. For example, resource dependence theory posits that when resources and competencies are not readily or sufficiently available, firms are likely to establish ties with other organizations (Child and Faulkner, 1998: 198-203). This theory supports the capabilities driver. As most firms cannot develop all capabilities needed internally, developing an Inter-Organizational Relationship is one way for firms to obtain these resources and is often the most practical. Relationships enable firms to take advantage of complementary assets and to reduce redundancy (Dyer and Singh, 1998: 665-670). The more capabilities a firm needs, the more likely they are to look at building a closer relationship with the firm(s) that can provide them. Doney and Cannon (1997: 35-51) provide one example of empirical support for this, as they successfully tested company size and experience as two capabilities that lead to higher levels of trust. When two firms find a match between their needs and the capabilities of the other firm, they strive to obtain synergies from the shared capabilities.

Firms often enter into and develop closer relationships because they expect higher benefits. The literature on collaboration and cooperative relationships frequently mentions the potential for reduced costs, increased sales, and even a competitive advantage. Sinclair, Hunter and Beaumont (1996: 9-19) conducted a case study where they found that the motivation for entering collaborative relationships was the expectation of increasing competitive advantage through the maintenance and/or growth of market share, long-term reliability of supply, joint product or process development, and more effective control of logistics.

External forces and the environment have been studied as influences on relationships. In this study, the term external influences mean customer direction or competitor pressure. While the authors could not find any empirical studies pertaining to these specific influences, studies on networks provide support for these drivers.

Networks of firms are formed in response to dynamic business pressures, many of which come from competitors. Achrol (1997: 56-71) states that organizations must exchange resources with a network of external actors, which include all members of the supply chain. These actors often influence the closeness of the relationships within the network.

“Channel relationships can exhibit considerable inertia. Relationships that have lasted a long time are more likely to continue.” (Anderson and Weitz, 1989: 314) Specifically, organizations that have lasted a long time relationship with others are more likely to continue because of their personnel relationship. This lasted long relationship can create the inert to them. It is not surprising that those interviewed identified history (age of the relationship or reputation) as a driver of close relationships. The history of the relationship acts as a specific investment (i.e., time) in the supplier or customer, and this is substantiated in the literature. Many of the studies on transaction cost analysis therefore support history as a driver. When relationships have a history, previous dealings between the firms provide a framework for subsequent interaction (Doney and Cannon, 1997: 35-51). These authors proceed to hypothesize associations between reputation and trust, and length of the relationship and trust. Ganeshan (1994: 1-19) also studied the influence of reputation and examined specific investments as well. He found significant relationships for both.

Relationships are ultimately developed and managed by individuals. Therefore, it is expected that the characteristics of interpersonal relationships (e.g., interaction, personalities) play a role in Inter-Organizational Relationship. When studying buyer-seller relationships, Doney and Cannon (1997: 35-51) found that salesperson likeability played a significant role in the development of trust in a relationship. Nicholson, Compeau and Sethi (2001: 3-15) conducted a study on the role of interpersonal liking in building trust. They said that liking is an affective attachment or emotional connection that one feels for another. This feeling was hypothesized to go beyond mere acceptance of a competent business partner. They found that liking has a significant impact on trust in an Inter-Organizational Relationship.

Just as respondents discussed the positive influence of continued positive performance and negative influence of poor performance on closer relationships, so does the literature, primarily through satisfaction and power. Anderson and Weitz (1989: 310-23) tested power as a contributor to the continuity of a relationship. They hypothesized that when power was imbalanced and one party used their power over another, there would be less cooperation in the relationship. Satisfaction with past outcomes is conceptualized as an antecedent to closer relationships by some authors. Ganeshan (1994: 1-19) discusses the influence of satisfaction with past outcomes on trust in the context of equity and social exchange theories. Positive performance indicates equity in the exchange, which then affects behaviors in subsequent periods.

2.7 Studies on Inter-Organizational Networks

2.7.1 Motives for Inter-Organizational Networks

Resource dependence theorists view a market environment as a set of organizations that engage in exchange relationships with one another. Organizations engage in resource exchange relationships because no one organization possesses a sufficient amount of every resource needed. Thus the task environment is important for survival. More alliance relationships are expected when resource flows are particularly problematic and environmental uncertainty is high. Therefore, managers that wish to get things done effectively and efficiently must enter into formal and informal exchange relationships with others who control the resources. On the other hand, Social exchange theorists explain that not only can formal networking relations managers or individuals enter into informal networking relations or interpersonal relationships with others in order to exchange resources such as support, help, information, cooperation, advice, and harmony.

2.7.2 Networking Exchange Activities

Managers' work includes a lot of communication and interaction and they can be described as interacting in social or communication networks. Their networks consist of the regular patterns of person to person contact that can be identified as people exchanging in a human social system. Social exchange theorists argue that

social relationships involve the “exchange” of resources such as status, information, goods, services, money, security, and love (Knapp, 1984: 370-376). Thus managers engage in exchange activities that can be categorized into three elements: social, business, and information. These exchange activities are related to their personnel performance and organizational level performance.

2.7.3 Inter-Organizational Network Development

Social exchange theorists argue that personal relationships are an on-going process and they need to be maintained and developed continuously. Establishing and maintaining mutually rewarding exchange relationships is considered an important prerequisite for successful cooperation. Establishing and maintaining a cooperative relationship requires a holistic understanding of what other persons consider as rewarding and how to maintain a mutually beneficial system of exchange. Knapp (1984: 245-256) explains that there are five stages of relationship development. They are initiation, experimenting, intensifying, integrating, and bonding. Duck (1985: 1-30) proposed a four stage model: sociological cues, pre-interaction cues, interaction cues, and cognitive cues. These kinds of relationship require interaction among individuals over a long period and continuous maintenance and development. In addition, all problems arising from their communication processes should be solved. Mutual support and understanding are necessary elements for sustainable relational development. Thus managers need to develop and maintain networking relationships which are part of an on-going process.

2.7.4 Inter-Organizational Networks and Performance

Inter-organizational networks involve activities performed by managers in order to develop and maintain formal and informal relationship with others inside and outside their organizations. Networking helps managers to get things done effectively. Their relationship with others requires extensive care because it is an on-going process. The relationship must be well developed and maintained. In their relationship, they perform business, social, and information exchange activities.

2.8 Leadership Theories

2.8.1 A Comparison of Participative Leadership Theories in Three Cultures

Leadership is one of the well-researched topics in the United States and in other nations. According to Bass (1998: 154), “there are as many definitions of leadership as there are persons who have attempted to define the concept.” Since many previous scholars have devoted research to studying leadership, many leadership theories have been generated. However, most of these theories were formed in the Western countries.

With empirical support, the generally-accepted U.S. theories such as those of Maslow, Herzberg, McClelland, Vroom, McGregor, Likert and Blake and Mouton might not apply or only very partially apply, outside the borders of their country of origin assuming they did apply within those borders.

Hofstede (2001: 374) further proposed that “ideas and theories about management and organization are often exported to other countries without regard for the values context in which these ideas were developed.” He argued that “there is no single formula for developing successful managers that can be used in different cultures” (Hofstede, 2001: 390). Dorfman, Howell, Hibino, Lee, Tate and Bautista (1997: 259-274) also argued that while the phenomenon of leadership is widely considered to be universal across cultures, the way in which it is operationalized is usually viewed as culturally specific. Conflicting viewpoints exist in the leadership literature concerning the transferability of specific leadership behaviors and processes across cultures.

House, Hanges, Javidan, Dorfman and Gupta (2004: 5) also made a similar point: “Leadership is culturally contingent.” That is, views of the importance and value of leadership vary across cultures.

Hofstede’s (2001), Dorfman et al.’s (1997) and House et al.’s (2004) statements have raised an important research issue: a better understanding of international leadership theories is needed. Under the different cultures, the primary purpose of this review is to compare the participative leadership theories that have

been developed in different cultures since “making decisions is one of the most important functions performed by leaders” (Yukl, 2002: 80).

The following statements include: (a) a review of one of the dominant views of leadership in contemporary American scholarly literature, (b) a discussion of the major participative leadership communication theories/researchers in three different cultures, (c) an evaluation of the strengths and weakness of these participative leadership communication theories, and (d) conclusions drawn from reviewing and comparing these participative leadership communication theories.

2.8.2 Dominant Views of Leadership in the United States

After reviewing a great deal of contemporary scholarly literature, it is apparent that there are several dominant views in the field of leadership study. These dominant views, which are well-studied by American scholars, include participatory leadership theories, transformational leadership theory (Bass, 1998: 168-175), and contingency theories of leadership (Dorfman et al., 1997; House et al., 2004). The dominant leadership view chosen from contemporary American scholarly literature for examination is the concept of participative leadership, which has received extensive attention in the scholarly literature in many fields, including communication, management, organizational leadership, and organizational psychology. For example, Yukl (2002) discussed the benefits of participative leadership from an organizational leadership perspective.

Participative leadership offers a variety of potential benefits, but whether the benefits occur depends on who the participants are, how much influence they have, and other aspects of the decision situation. Four potential benefits include higher decision-making quality, higher decision acceptance by participants, more satisfaction with the decision process, and more development of decision-making skills.

Miller (2006: 181-189) also discussed the effect of participative leadership from an organizational communication perspective. According to Miller (2006: 181-189), “the most widely studied attitudinal effect of participation is job satisfaction.” Although the relationship between participative leadership and job satisfaction has been frequently studied by previous scholars, the results of previous empirical studies have not been inconsistent. According to Yukl (2002: 86), “after more than 40 years

of research on participation, we are left with the conclusion that participative leadership sometimes results in higher satisfaction, efforts, and performance, and at other times it does not.” Why are the results of participative leadership studies inconsistent? There might be situational variables which affect the effectiveness of participative leadership. The author argues that participatory leadership needs to be examined from a cultural perspective because this style of leadership is viewed as culturally bounded and incorporates the concept of two-way communication.

2.8.3 Participative Leadership in Three Cultures

After reviewing prior leadership literature, House et al. (2004: 56) noticed that the field of leadership study is “western-dominated.” According to Yukl (2002), most of the leadership research in the past five decades was conducted in Western countries, including the United States, Canada, and Western Europe. House et al. (2004: 443-444) also noted the “need for a better understanding of the way in which leadership is enacted in various cultures and a need for an empirical grounded theory to explain differential leader behavior and effectiveness across cultures.” In order to bring in international perspectives on leadership communication, Japan and Taiwan have been chosen as comparison cultures due to their relevance for a broader understanding of communication phenomena in cultures which are highly divergent from the United States. According to Hofstede (2001), the United States is a highly individualistic culture. However, both Japan and Taiwan are collectivistic cultures. Japanese management and leadership styles have received extensive attention in both the scholarly and popular management literature in the United States. For example, Ouchi (1981: 208-378) proposed Theory Z, based on the principles of organizational management in Japanese organizations. He proposed that some Japanese organizational management principles could be adopted by American organizations. Thus Japan provides a comparison culture that is familiar to scholars studying communication within organizations. Taiwan provides a comparison cultural setting that is less familiar to U.S. scholars and that has undergone a recent change from a more authoritarian structured society to one that is more democratic. Both of these cultures, thus, provide opportunities to compare participative leadership theories in different cultural settings.

2.8.3.1 Leadership in the United States

In the United States, scholars tend to define leadership by identifying leaders' functions in organizations and categorizing leadership into different leadership styles. Leadership is the process of influencing others to understand and agree about what needs to be done and how it can be done effectively, and the process of facilitating individual and collective efforts to accomplish the shared goals. Leadership is treated as both a specialized role and as a social influence process (Yukl, 2002).

Yukl's (2002) definition of managerial leadership clearly defines leaders' roles and responsibilities, and reveals the importance of leadership effectiveness in organizations. Yukl (2002) further argued that decision making is one of the most important functions that leaders perform. Hence, the methods those leaders choose for making decisions have become an issue to be discussed. Participatory leadership is a way for making effective decisions. According to Yukl (2002: 202), "many of the activities of managers and administrators involve making and implementing decisions, including planning the work, solving technical problems, selecting subordinates, determining pay increases, making job assignments, and so forth. Participative leadership involves efforts by a leader to encourage and facilitate participation by others in making important decisions."

Most American scholars clearly recognize the value of participative leadership. According to Stewart (1991: 246-251), participative decision making has been well-researched in North American organizations. Seibold and Shea (2001: 684-703) discussed five types of participation programs in the workplace, including quality circle (QC), quality of work life program (QWL), employee stock ownership plans (ESOPs), scalon gainsharing plans (SGP), and self-directed work teams (SDWT's). These five types of participative decision making programs can provide organizational leaders with frameworks to encourage employee participation in the workplace. Miller (2006: 181-189) also noted that "in the past decade, communication scholars have become increasingly interested in a participative ideal in organizations-workplace democracy." Deepz (1973: 139-159) argued that "in the modern period, participation has been recovered as an issue in the everyday social construction of meaning and society." Deepz (1973: 139-159) further proposed that workplace

democracy involves multiple stakeholders, such as employees, investors, consumers, and community residents. In order to promote workplace democracy, shared decision-making among the multiple stakeholders is important in the contemporary workplace. Several American theorists have developed participative decision-making models. Tannenbaum and Schmidt (1958: 259-264) were the pioneers that created a continuum that described different decision-making styles. These different styles, ranging from boss-centered leadership to subordinate-centered leadership, provide alternatives that organizational leaders can choose from when making decisions. They also present three factors/forces that managers should consider in deciding which leadership styles to use, including forces in the manager, forces in the subordinates, and forces in the situation. The forces in the manager include the manager's value system, confidence in subordinates, and feelings of security. The forces in subordinates are the subordinates' need for independence, tolerance level for, and expectation for sharing in decision making. The forces in the situation include organizational style, group effectiveness, the problem, and the pressure of time.

In summary, Tannenbaum and Schmidt's (1958) theory provided a classification for leadership styles and suggested that the effective leader is the one that adopts a style which is consistent with the demands of the subordinates and the situation. This continuum theory is frequently cited by contemporary leadership authors and is frequently used by researchers throughout the world.

According to Tannenbaum and Schmidt's (1958) continuum, Hofstede (2001), a Netherlands researcher, distinguished four types of decision-making styles: (1) autocratic (tells), (2) persuasive/paternalistic (sells), (3) consultative (consults), and (4) democratic (participative). The first two styles are autocratic decision-making styles. The last two styles involve more of the subordinates' participation in the decision-making process. Only the fourth style, however, is considered to be the real participative leadership style. The participative style is rarely used by managers, but is desirable for organizational development purposes. Hofstede (2001) used these four styles to measure organizational employees' preferred leadership styles and organizational managers' actual leadership behaviors in 40 different countries. The statistical results of his study indicate that the autocratic leadership styles (autocratic and persuasive styles) are correlated with a culture's power distance index. The

results of Hofstede's (2001) study demonstrated that subordinates' expected leadership decision-making styles are associated with their cultural values. This finding confirms Tannenbaum and Schmidt's (1958) idea that forces in the subordinates affect leaders' decision-making styles. It also demonstrates that forces in the subordinates are an important situational variable which determines the effective leadership style.

2.8.3.2 Leadership in Japan

The Japanese concept of participative leadership is also noteworthy. Due to the high level of economic productivity of Japanese organizations, many American scholars have begun to be interested in the Japanese style of participative leadership communication. According to Keys and Miller (1982: 123-135), Japanese leadership is effective because the Japanese style of participative decision making has resulted in "higher levels of motivation, delegation of decision making, commitment, and intrinsic job satisfaction." Ouchi (1981) has also argued that Japan is a collectivistic culture. Thus, Japanese organizations would emphasize collective decision making and collective responsibility.

Hirokawa (1988: 500-503) used a communicative perspective to define the Japanese style of participative leadership communication. Japanese organizational leaders should act as effective communicators in organizations. Japanese organizations become effective systems because managers encourage and facilitate the flow of information among organizational members. Japanese leaders make efforts to maintain harmony within the organization and to adopt a "bottom-up process of decision-making" to be available to their employees.

Like Hirokawa and Misumi (1985) discussed the participative decision-making process in Japanese organizations when proposing PM leadership theory. According to Misumi (1985: 198-203), "PM leadership is a theory of leadership behavior based on two groups of functions. The first function is oriented towards goal achievement or problem solving, and the second function is oriented towards the continuation or maintenance of the group itself. A leadership that fulfils the former is referred to as a P-type (P standing for Performance) leadership (or behavior), and leadership that fulfils the second function is called M-type (M standing for Maintenance) leadership."

Misumi (1985: 205-210) believed that effective leaders should perform a high performance (P) function and a high maintenance (M) function. According to Misumi (1985), there are four combinations which categorize leadership styles: (1) high performance and high maintenance (PM), (2) high performance and low maintenance (Pm), (3) low performance and high maintenance (mP), and (4) low performance and low maintenance (pm). Misumi (1985) argued that the high performance and high maintenance (PM) styles are the ideal leadership styles. Since facilitating participative decision-making process is an important task which Japanese organizational leaders should perform, Misumi (1985) discussed the traditional participative decision-making process in Japanese organizations. According to Misumi (1985: 220-223), "In the Japanese ringi procedure, a proposal is initiated by a leader in a lower echelon, and sent up to the top for approval through the chain of command, eventually to be brought back to the lower echelon on a top-down basis after having been approved. The proposal thus approved is ready for execution by the initiator. In this procedure, the person who handles the process of initiating a proposal is performing the function of the staff and he turns into a leader of the line organization at the point at which the proposal is executed. In other words, the same person performs the function of both staff and line people."

Hirokawa (1988) does not quantitatively operationalize his theory. However, his communicative view on Japanese participative decision making has been well received. For example, Stewart et al. (1991) used Hofstede's (2001) four decision-making styles to evaluate Hirokawa's (1988) statement about Japanese leadership. The relationships among preferred decision-making style, perceived decision-making style, openness of communication, and communication satisfaction are examined in the study. The results of the study demonstrated that "Japanese workers clearly prefer persuasive and consultative decision-making styles over the participative style" (Stewart et al., 1991: 170-173). The results of this study differed from the more popular literature that discusses the Japanese concept of participative leadership. The discrepancy between the empirical results of Stewart et al's (1991) study and the Japanese theories may imply that "managers may prefer to use a more consensual style among themselves while their subordinates prefer them to use a more persuasive or consultative style" (Stewart et al., 1991: 170-173). The results of

Stewart et al.'s (1991) study are noteworthy for illustrating the difference between subordinates' expectations and leaders' perceptions in Japanese organizations and imply that Hirokawa's (1988) theory was established based on the manager's perspective instead of the employees' perspective.

Unlike Hirokawa (1988), Misumi (1985) operationalized PM leadership theory. Misumi (1985) used quantitative scales to measure employees' perceptions about their leaders' leadership styles. In order to test the applicability of Misumi's (1985) PM leadership theory in a different cultural setting, Ehigie and Akpan (2004) adapted Misumi's (1985) leadership scales to study perceived leadership styles in total quality management (TQM) organizations in Nigeria. The results of their study demonstrated that "high maintenance and low performance leadership styles were the best combination for TQM practice." (Ehigie and Akpan's, 2004: 24-40) In addition, Ehigie and Akpan argued that "Contrary to the findings of Misumi (1985), performance was worst under high maintenance high performance leadership style. This implied that the efficacy of the performance-maintenance leadership style in enhancing productivity is a function of the management philosophy put in place, since Misumi recommended high performance-maintenance leadership style based on his findings in non-TQM organizations."

It is interesting to see that the results of Ehigie and Akpan's (2004) study are different from Misumi's (1985) argument-that high performance and high maintenance (PM) is the best leadership style. The discrepancies between the empirical results from Ehigie and Akpan's (2004) Nigerian study and Misumi's (1985) Japanese study probably are due to national cultural differences and organizational cultural differences. Japan and Nigeria do have different cultural values. TQM organizations and non-TQM organizations also have different organizational communications patterns. In TQM organizations, teamwork is very important. Thus, the maintenance function becomes even more important than performance functions.

2.8.3.3 Leadership in Taiwan

Unlike the American view and Japanese view of participative leadership, most literature that discusses Chinese leadership stresses the concept of authoritarian leadership. According to Bond and Hwang (1986: 223-230), "it seems

that Chinese prefer an authoritarian leadership style in which a benevolent and respected leader is not only considerate of his followers, but also able to take skilled and decisive action.” According to Redding and Wong (1986: 277-280), “leadership style within Chinese companies is directive and authoritarian.”

Hwang is a prominent Taiwanese psychologist who has studied psychology as well as Chinese people’s leadership behavior in organizations. According to Hwang (1986), most Chinese organizations are family businesses. The leaders of these family-owned organizations tend to be authoritarian leaders. In order to maintain their authoritarian status in their organization, these leaders withhold most of the information in organizations from their subordinates—they only let their subordinates know very limited amounts of information. The amount of information that a subordinate can get depends on whether the leader trusts the subordinate or not. In these organizations, there is a power distance between leaders and followers. According to Wu, Taylor and Chen (2001: 317-326), Taiwan has experienced dramatic political and societal changes after martial law was abolished in 1987. After martial law was abolished, Taiwan moved dramatically toward democracy. Although democracy has replaced authoritarianism in Taiwan after 1987, Hwang (1986: 635) has continued to argue that “authoritarianism: paternalistic management” is the typical leadership styles in Taiwanese organizations. According to Hwang (1986: 636), “The top manager in the organization is usually the owner of the enterprise. This person is the decision-maker who holds supreme power in the organization and assumes all the responsibility of success or failure in running the business. The manager usually prefers a paternalist or autocratic style of management, assigning family members important positions such as financier, accountant etc. The manager supervises subordinates, pushes them to achieve the organizational goals, and maintains a vertical power distance with them.”

Like Hwang (1986), Kao (1986) also proposed that Chinese organizational leaders tend to adopt a supervisor-centered, authoritarian leadership style. In family-owned organizations, organizational leaders are not elected to be leaders; they become organizational leaders because they are the owners or the owner’s relatives. Chinese people stress Guanxi, interpersonal relationships, in their

social lives. Therefore, Chinese leaders pay a great deal of attention to maintaining interpersonal relationships among their in-group members.

To summarize, Chinese leadership theories all illustrate that the Chinese style of leadership is authoritarian, which is different from American and Japanese views of participative leadership. Chinese leaders tend to control information and restrict subordinates' participation in order to maintain their status in the organization. These authoritarian leaders allow very few subordinates who they trust to share corporate information and participate in some decision-making processes. Thus two characteristics can describe the Chinese view of leadership.

This section reviews the empirical results of several Taiwanese leadership studies, although these studies all adopted theories and used measurement scales that have been designed in Western countries.

Bond and Hwang (1986) reviewed several leadership studies that were conducted by Taiwanese psychology students. These studies used a Chinese version of the Leader Behavior Description Questionnaire (LBDQ), the supervisory Behavior Questionnaire (SBQ), or the Leader Opinion Questionnaire (LOQ) to study the relationship between perceived leadership behaviors and subordinates' job satisfaction. Participants in these studies included female government employees, elementary school teachers, junior high school teachers, labor workers, and accountants. The results of these studies were very similar and all demonstrated that Taiwanese employees preferred an authoritarian leadership style. In addition, the authors of these studies emphasized that leaders should maintain a harmonious and considerate relationship with their subordinates. The results of these previous studies were consistent with Hwang's (1986) views of Chinese authoritarian leadership. However, all studies reviewed by Bond and Huang (1986) were conducted about 20 year ago. When these studies were conducted, Taiwan was under strict control of martial law and an authoritarian political system. As discussed earlier, martial law was abolished in 1987, and Taiwan has made a significant improvement in democratization. According to Myers (2002: 369), "authoritarianism has been replaced by democracy in Taiwan. Taiwan "enjoys a modern lifestyle, freedom, and political democracy." In addition, the Taiwanese culture has been affected by the synergy of Chinese culture, Japanese culture, and American culture. To investigate

the impact of cultural changes on leadership behaviors in Taiwan, updated empirical studies should be conducted. For example, Wu and Stewart (2003) conducted a study to compare university employees' expected leadership styles in Taiwan and the United States. They surveyed three hundred university employees in these two countries. The results demonstrated that the democratic (participative) leadership decision-making style is the most preferable leadership style among Taiwanese and U.S. participants. Thus, the validity of Hwang's (1986) autocratic leadership theory has been challenged by Wu and Stewart's (2003) updated empirical study.

2.9 Theoretical and Practical Implications

After comparing the concepts as well as the empirical studies of participative leadership theories in three cultures, the United States, Japan, and Taiwan, several theoretical and practical implications are identified. First, participative leadership is a culturally-bounded phenomenon. The effectiveness of participative leadership varies from culture to culture. According to Hofstede's (2001) study, employees' preferred decision-making styles that are determined by their cultural value of power distance. However, the relationships among participative leadership and Hofstede's (2001) other four cultural dimensions have not been empirically tested. Future studies may investigate what cultural values affect employees' preferred leadership styles. Second, most leadership theories developed in these three cultures all focus on leaders' perceptions of effective leadership. However, "leadership can only exist as a complement to subordinateship" (Hofstede, 2001: 82). New theories should be built based on both the leaders' perceptions and subordinates' expectations. Third, leadership theories in Taiwan are outdated and do not reflect current Taiwanese leadership patterns due to the recent cultural and societal changes. In addition, most Taiwanese leadership studies used theories that were established in other cultures to measure and examine Taiwanese leadership. In order to gain greater knowledge of the Taiwanese style of leadership, new Taiwanese leadership theories should be established and tested by researchers. Fourth, most researchers that study leadership effectiveness use participative decision making as the independent variable to investigate employees' satisfaction and employee performance.

Finally, after evaluating participative leadership theories in three cultures, the author argues that the participative leadership theories reviewed in this paper all have their own merits. American theory provides the idea that participative leadership is affected by situational factors, which provides a contingency perspective to study participative leadership. Japanese leadership theory creates a communicative framework to discuss participative decision making. Taiwanese leadership theory emphasizes that participative leadership is affected by cultural values. For instance, large power distance can decrease participative decision making in organizations. New theories may combine the advantages of leadership theories from different cultures. To combine the merits of participative leadership theories in these three cultures, participative leadership theorists may include the contingency perspective, communicative perspective, and cultural perspective in their theoretical models.

Kim (2002: 238-242) has argued that “in line with the research on participative management, participative decision making has been emphasized in relation to job satisfaction.” However, Kim (2002: 238-242) further argued that “the evidence regarding the impact of participative decision making on job satisfaction has not been consistent. The relationship between participative decision making and job satisfaction could be nonlinear and contingent on individual and situational variables.” Kim’s (2002) argument has revealed the importance of situational variables that may affect the effectiveness of participative leadership. A cultural contingency model of participative leadership communication is proposed. The key point of this contingency model is that culture is the most important situational variable that affects leadership effectiveness. Yukl (2002: 8) stated that “most researchers evaluate leadership effectiveness in terms of the consequences of the leader’s actions for followers.” The author believes that subordinates’ communication satisfaction and subordinates’ job satisfaction can be indicators of leadership effectiveness because follower’s communication satisfaction and previous studies have demonstrated the importance of communication between leaders and subordinates. For example, Infante, Anderson, Herington and Kim (1993: 307-326) have argued that “subordinates’ satisfaction in communicating with their supervisors predicted subordinates’ job satisfaction.” Schnake, Dumler, Cochran and Barnett (1990) also discussed the importance of leadership communication. They argue that

the quality of supervisor-subordinate communication will affect subordinates' communication, work motivation, perception of warmth and support, and perception of job performance. According to the human relations approach of organization communication, there are links between satisfaction of higher order needs, job satisfaction, and higher productivity. Therefore, when subordinates are satisfied with the leader-subordinate communication, they have higher job satisfaction and are more productive. Thus, leaders can be viewed as effective if they can effectively communicate with their subordinates.

To sum up, the relationships between leadership communication, cultural values, and subordinates' job satisfaction are defined. When participative leadership communication is viewed as the independent variable, the outcome variable is subordinates' communication satisfaction. Cultural value is the mediating variable between participative leadership communication and subordinates' communication satisfaction. Subordinates' communication satisfaction will then affect subordinates' job satisfaction. Subordinates' job satisfaction can be regarded as an indicator of leadership effectiveness.

Taiwan may provide an example to explain the model. From the empirical studies of Taiwan, it has been demonstrated that subordinates prefer the autocratic leadership communication style. However, after the Taiwanese cultural values have been dramatically changed due to the changes in the political system after 1987, a contemporary Taiwanese leadership study (e.g., Wu and Stewart, 2003) demonstrated that Taiwanese participants would expect a participative type of leadership communication style because of the changes in power distance value. In Hofstede's (2001) study, Taiwan had a medium/high power distance value. However, in Wu and Stewart's (2003) recent study, Taiwan had a medium/low power distance cultural value. When a leader's communication style matches subordinates' expectations, subordinates will have higher communication satisfaction with the leader. Thus, participative leadership style was viewed as ineffective in the traditional Taiwanese society; however, it was viewed as effective in the contemporary Taiwanese society due to the changes of the cultural value of power distance. Thus, cultural values can be the mediating variable between participating leadership and subordinates' communication satisfaction. Based on Infante et al.'s (1993) argument, when

subordinates have high communication satisfaction, they will have high job satisfaction.

2.10 Conceptual Framework

This research proposes a perspective of inter-organizational networks based on an integration of resource dependence theory, institutional theory, transactional cost economy, and inter-organizational theory to study the Pilot Cooperated Projects (PCPs) initiated by The Department of Local Administration (DOLA). The Pilot Cooperated Project (PCP) has the objective to build the capacity of local authorities through local public standards and local cooperation. Three provinces, Kanchanaburi, Rayong, and Lampang, are studied by referencing from the basic concept of networking and theories mentioned above. The factors affecting the cooperation, laws and regulations of Thailand country, common needs among local residents, attitude among local residents towards the cooperative network, level of local residents' participation, number of parties/actors involved in the cooperative network, orientation towards cooperative behavior, and leadership style are studied. Moreover, the pattern of interaction among factors leading to performance of PCPs is studied. The type of cooperative assignment is assigned by DOLA. Lampang province with the cooperation of 4 LGOs, e.g., Koh Kha Tambon Municipality, Koh Kha TAO, Ta-Pa TAO, and Sa-la TAO worked in the Garbage Management PCP. Kanchanaburi province with the cooperation of 4 LGOs, Kanchanaburi Town Municipality, Pak Praek TAO, Ko Samrong TAO, and Ta-Makam TAO worked in the Disaster Prevention and Mitigation PCP. Rayong province with the cooperation of 8 LGOs, Bann Pluak Daeng Tambon Municipality, Jom Pol Choa Praya Tambon Municipality, Pluak Daeng TAO, Mab Yang Porn TAO, Mae Nam Koo TAO, Ta Sit TAO, Nhong Rai TAO, and Lahan TAO worked in the Infrastructure Management PCP. The Conceptual Framework is shown as follows.

- Legal Environment {
- Unsupportive law & regulation for self initiated cooperative
 - Limitation of budget utilization in all cooperative activities
 - Type of cooperative assignment assigned by DOLA

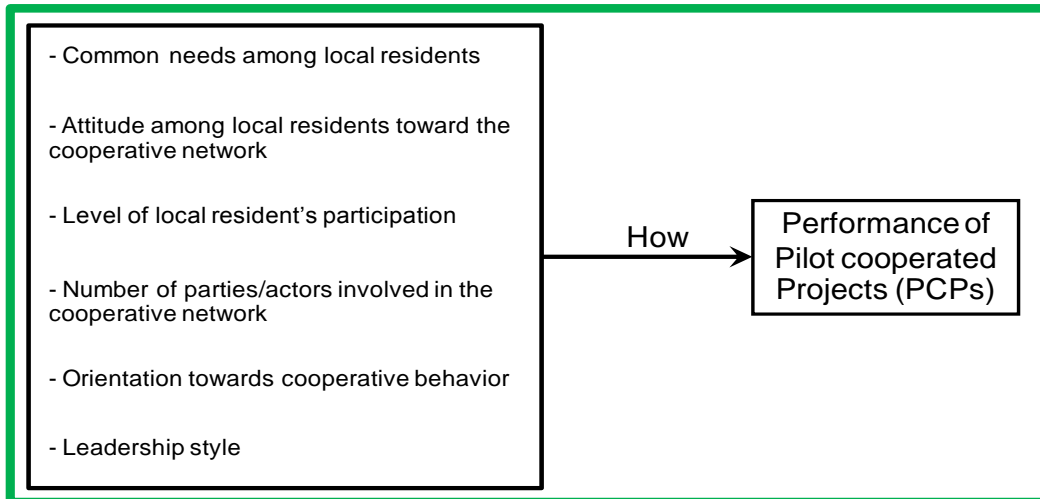


Figure 2.1 Conceptual Framework

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Method

The research methodology in this dissertation is “qualitative.” The sets of open questions were used for face-to-face interviews, not only for representatives of the Department of Local Administration, DOLA, but for the representatives of all LGO members in three provinces. The progressive reports from all three Pilot Cooperated Projects from the DOLA were first deeply studied as basic information before interviewing the local people that operated the projects. The Department of Local Administration was the first place of connection. Mr. Apiwat, who had worked with the three Pilot Cooperated Projects since beginning until the end of the project, was interviewed to get a general idea about the establishment of this project. The project progression and summary documents were also provided by Mr. Apiwat. From the documents provided by the representative of the department of Local Administration, the overall picture of these three Pilot Cooperated Projects became clearer. Moreover, there was not the same level of performance among these three Pilot Cooperated Projects, although they are initiated in the same way and by the same group of people. The reasons why the performance of three Pilot Cooperated Projects was not at the same level were studied through in-depth interviewing of the representatives of each Pilot Cooperated Project accordingly. From reviewing the documents provided by The Department of Local Administration’s representative, the first draft of concerned factors was set as shown below. The factors were adjusted from time to time until the study was completed in order to see if there were some valuable inputs from additional study. The first draft of factors affecting the performance of the Pilot Cooperated Project is shown below.

- 1) Common needs among local residents
- 2) Types of cooperative assignment assigned by the DOLA
- 3) Budget from the LGO members supporting the Network Center
- 4) Orientation towards cooperative behavior
- 5) Leadership style

Then the representatives of the target areas were interviewed, i.e. Koh Kha, Lampang, Kanchanaburi, and Plouk Daeng district, and Rayong provinces, which comprised the next step of the study. Moreover, the concerned local residents, although they had moved to work at another LGO, who ran the three Pilot Cooperated Projects (PCPs) from the beginning of the project until its completion were interviewed by using open questions. The people that were interviewed were not necessarily to be the Mayor of the LGO or the Network Center leader. It can be people that had really worked on the project. All three provinces were first contacted by telephone. The municipality that was the Network Center of each project was contacted. Kanchanaburi is the first province to be contacted. The Kanchanaburi Town Municipality, the DPM Network Center, was contacted by referring to the DPM Pilot Cooperated project under the initiative of cooperation among three parties, the DOLA, the JICA, and Thammasat University. The Kanchanaburi Town Municipality representative suggested that researcher interview the Mayor of Kanchanaburi Town Municipality, who is also the DPM Network Center Chairman. She said that the Mayor of Kanchanaburi Town Municipality, Mr. Prasit Opastipakorn, was the one that had run the Disaster Prevention and Mitigation PCP from the beginning until the project closed. Moreover, he was the one that had the most knowledge about the Disaster Prevention and Mitigation PCP. If the researcher wanted information about the Disaster Prevention and Mitigation PCP, she had to interview the Mayor of Kanchanaburi Town Municipality. After the interview, Mr. Pramote Oonjitsakul, Mr. Sanit Poodam, Mr. Amorn Ruenchaichon, the mayor of Pak Praek TAO, Samrong TAO, and Ta Makahm TAO, and the Vice-chairman of the DPM Network Center were interviewed. Moreover, even though he had moved to another TAO after the Disaster Prevention and Mitigation PCP closed, Mr. Sakon Luengpaitoon, Committee and Secretary of the DPM Network Center, Chairman of DPM Sub-Center and Municipal clerk of Kanchanaburi Town Municipality, at that time, was interviewed as

well. Due to Mr. Sakon Luengpaitoon being the main person that worked on the Disaster Prevention and Mitigation PCP, he was interviewed more than other people. The second province contacted was Koh Kha, Lampang. The Koh Kha Tambon Municipality, the GM Network Center, was contacted by telephone. Mr. Chawarn Kaewlue, a committee member and assistant secretary of the GM Network Center, was recommended to be interviewed because, according to the Koh Kha Tambon Municipality representative, he as the major person that directly worked for this Garbage Management PCP. Mr. Chawarn Kaewlue, who is also the chief administrator of the Koh Kha Tambon Municipality, was then directly contacted to make an appointment for a face-to-face interview. When the researcher met Mr. Chawan, he not only provided good information about the Garbage Management PCP, he also assisted the researcher by contacting other assistant secretaries of the GM Network Center, such as Ms. Bongkotch Boonjaroen who is the Municipal Clerk of Koh Kha TAO, Mrs. Srijantra Ong-aat, who is the Municipal Clerk of the Ta Pa TAO, and Mrs. Nat-anong Pittayaseni, who is the Municipal Clerk of the Sala TAO, for face- to-face interviews at the same time by using open questions. The last province was Plouk Daeng district, Rayong. Although the Ban Pluak Daeng Tambon Municipality was currently the IM Network Center, the Plouk Daeng TAO was contacted because it was the first IM Network Center, so the Plouk Daeng TAO representatives should know well about the Infrastructure Management PCP. After the Plouk Daeng TAO representatives were briefly interviewed via telephone, the researcher knew that Dr. Somkiat Jongjitman, Secretary of the IM Network Center and the Municipal Clerk of Pluak Daeng TAO, although he had moved to the Laharn TAO, was recommended to be interviewed because he is the key person that seems to work for the Infrastructure Management PCP more than others. Moreover, all key persons of the seven other LGO members, i.e. Jomphonjaopraya Tambon Municipality, Baanplouk Daeng Tambon Municipality, Mabyangpornn TAO, Tasit TAO, Maenamkhu TAO, Lahan TAO, and Nongrai TAO, were interviewed.

After interviewing Mr. Prasit Opastipakorn, Chairman of the DPM Network Center and Kanchanaburi Town Municipality Mayor, the factors affecting the performance of PCPs were adjusted with the additional factors, which are shown as follows.

- 1) Common needs of local residents
- 2) Types of cooperative assignment assigned by the DOLA
- 3) Budget from the LGO member supporting the Network Center
- 4) Number of parties/actors involved in the cooperative network
- 5) Orientation towards cooperative behavior
- 6) Leadership style

Moreover, after the Lampang representatives, such as Mr. Chawarn Kaewlue, Ms. Bongkotch Boonjaroen, Mrs. Srijantra Ong-aat, and Mrs. Nat-anong Pittayaseni, had been interviewed, some adjustments in the factors affecting the performance of the PCPs were added with the additional factors. Some factors were also cut off, as shown below.

1) Unsupportive Laws and regulations for self-initiated cooperative in Thailand

- 2) Common needs of local residents
- 3) Type of cooperative assignment assigned by the DOLA
- 4) Limitation of budget utilization in all cooperative activities
- 5) Number of parties/actors involved in the cooperative network
- 6) Orientation towards cooperative behavior
- 7) Leadership style
- 8) Attitude among local residents toward the cooperative network
- 9) Level of local residents' participation

In addition, after Plouk Daeng district, the Rayong representatives, Dr. Somkiat Jongjitman, the IM Network Center secretary and Municipal Clerk of Plouk Daeng TAO, and other representatives from the seven LGO members were interviewed, some factors from all of the nine above factors were comprised of the legal environment instead of the direct factors affecting the performance of the PCPs. The details are shown as follows.

The legal environment

1) Unsupportive laws and regulations for self-initiated cooperatives in Thailand

- 2) Limitation of budget utilization in all cooperative activities
- 3) Specific type of cooperative assignment assigned by the DOLA

The factors affecting performance of the PCP

- 1) Common needs among local residents
- 2) Attitude among local residents toward the cooperative network
- 3) Level of local residents' participation
- 4) Number of parties/actors involved in the cooperative network
- 5) Orientation towards cooperative behavior
- 6) Leadership style

Under the same laws and regulations of Thailand, the pattern of interaction among the common needs among local residents, attitude among local residents towards the cooperative network, local residents' participation, number of parties/actors involved in the cooperative network, orientation towards cooperative behavior, and leadership style leading to the performance of the Pilot Cooperated Project is shown in the following figure.

Legal Environment {

- Unsupportive law & regulation for self initiated cooperative
- Limitation of budget utilization in all cooperative activities
- Type of cooperative assignment assigned by DOLA

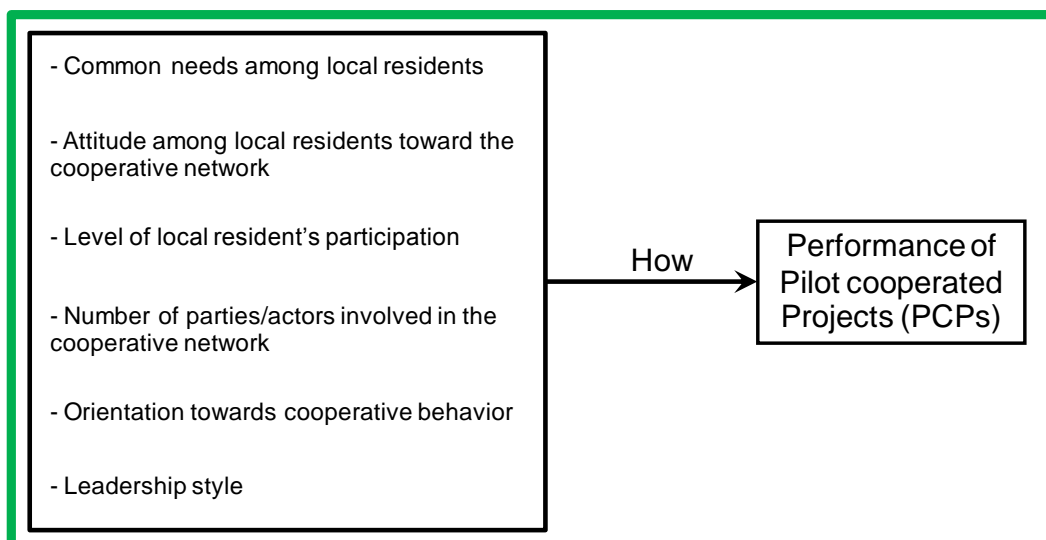


Figure 3.1 Conceptual Framework

3.2 Unit of Analysis

In this dissertation, the unit of analysis is the “Local governments that run the three Pilot Cooperated Projects (PCPs)” under the initiative of the DOLA.

CHAPTER 4

RESEARCH FINDINGS

From studying the Pilot Cooperated Projects (PCPs) assignment assigned by The Department of Local Administration (DOLA) to LGOs in three provinces, Lampang, Kanchanaburi, and Rayong, there are six factors affect the performance of Pilot Cooperated Project (PCPs), the common needs among local residents, the attitude among local residents toward the cooperative network, the level of local resident's participation, the number of parties/actors involved in the cooperative network, orientation towards cooperative behavior, and leadership style. Their pattern of interaction is shown as follows:

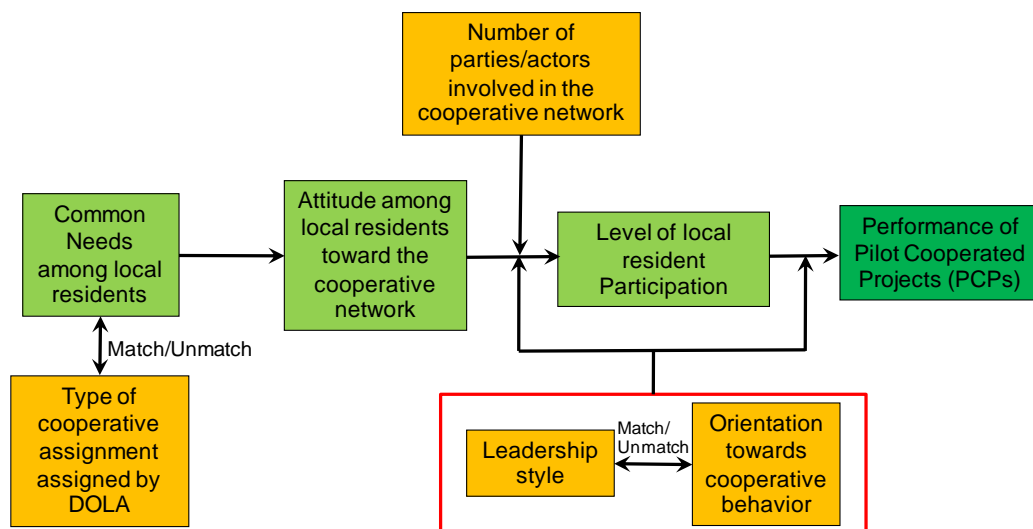


Figure 4.1 The General Pattern of Interaction Among Six Factors Affecting Performance of Pilot Cooperated Projects (PCPs).

The interaction among six factors, the common needs among local residents, the attitude among local residents toward the cooperative network, the level of local resident's participation, the number of parties/actors involved in the cooperative

network, orientation towards cooperative behavior, and leadership style, affect the performance of Pilot Cooperated Project (PCPs) under the legal environment, which includes, firstly, unsupportive laws and regulations for self-initiated cooperative in Thailand, and secondly, limitations of budget utilization in all cooperative activities mentioned in the MOU for public services zoning of Local Government Organizations, and specific types of cooperative PCP assignments assigned by DOLA, are discussed one by one for the three provinces.

4.1 The Legal Environment, Unsupportive Laws and Regulations for Self-Initiated Cooperatives in Thailand, Limitations of Budget Utilization in all Cooperative Activities, and Specific Types of Cooperative Assignments Assigned by the DOLA

In the past there have no any cooperated projects occurring among Local Government Organization in Thailand because the provision of laws about cooperative organizations of Local Government Organizations Act, B.E. 2496 (1953) allows only “municipalities” to cooperate with other “municipalities.” Moreover, although the Act, B.E. 2496 (1953) allows the “municipalities” to cooperate with other “Municipalities,” the law does not provide any details on the process of union founding, i.e., how to begin the process of issuing a royal decree to found a union. Therefore, even if the municipality administrators would like to found a union, there is not any guideline that they can use. With unsupportive provision of laws regarding cooperative organizations between the Local Government Organization, the Technical Cooperation Project on Capacity Building of Local Authorities through Local Cooperation and Local Public Standards initiated by the cooperation among three major agencies, the Department of Local Administration under the Ministry of Interior, the Japan International Cooperation Agency (JICA), and the Faculty of Political Science of Thammasat University, was forcedly assigned to three provinces, Lampang, Kanchanaburi, and Rayong, as the Pilot Cooperated Projects (PCPs). The Garbage Management PCP assignment was assigned to four LGOs in Kho Kha, Lampang province. The Disaster Prevention and Mitigation PCP assignment was assigned to four LGOs in Kanchanaburi province. The Infrastructure Management

PCP assignment was assigned to eight LGOs in Pluak Daeng district, Rayong province. These three Pilot Cooperated Project assignments were assigned under the concept of the 1st model of the MOU for public service zoning of the Local Government Organization, a guideline for operating the Pilot Cooperated Project. The model of the MOU for public service zoning of Local Government Organization prepared by the Researching and Consultant Institute of Thammasat University who was assigned by DOLA. There are two models of the MOU for public service zoning of the Local Government Organization. Both models consist of fourteen administrative procedure subjects. The details of both models of MOU are mostly the same except for four main issues, which are shown in the table below.

Table 4.1 The Differences between the two Models of the MOU for Public Service Zoning of the Local Government Organization

Topic	First Model	Second Model
1. General Issue	Cooperation between local government organizations can be accomplished according to present law without any adjustment. The executive committee will be responsible only for integrating the plan of performance and acting for achieving the objectives according to the principle.	The form of cooperation will be more advanced than in the first models. The executive committee will have administrative power regarding many duties such as budgetary management, purchasing and employment, distribution and managing of other administrative resources (personnel, equipment, place, and other properties), etc.
2. Budgetary Management	- Each local government organization that is a member will set up an expenditure budget in the form of a grant to the local government organization to which the chairman is	- Each local government organization that is a member must set up an annual subsidy budget to the center as per its minimum financial status and progressive rate. The executive committee will be responsible.

Table 4.1 (Continued)

Topic	First Model	Second Model
	<p>attached. The budget will be used for the center's activities as agreed in the center activity development plan.</p> <p>- In case there is any income from any activities, the income management will be according to the executive committee's resolution.</p> <p>- Each local government organization that is a member will set up an expenditure budget in the form of a grant to the local government organization to which the chairman is attached. The budget will be used for the center's activities as agreed in the center activity development plan.</p> <p>- In case there is any income from any activities, the income management will be according to the executive committee's resolution.</p>	<p>for defrayment of budget for the center's activities</p> <p>- Expenditure must be according to the particular budget for each area of responsibility</p> <p>- Each local government organization that is a member must set up an annual subsidy budget to the center as per its minimum financial status and progressive rate. The executive committee will be responsible for defrayment of budget for the center's activities.</p> <p>- Expenditure must be according to the particular budget for each area of responsibility.</p>

Table 4.1 (Continued)

Topic	First Model	Second Model
3. Purchasing and Employment	Purchasing and employment will be done by the local government organization. The members will be responsible for purchasing and employment within their own organization according to the present rules.	Purchasing and employment will be done by the executive committee.
4. Other Administrative Resource Distribution and Management (personnel, equipment, place and other properties)	Property/equipment will belong to each local government organization. The members must support other local organizations which lack that property/equipment.	The executive committee will distribute and manage administrative resources and properties to the local government organization. The committee will have proprietary rights to the resources and will be responsible for reparation.

From the above table under Topic 1, the general issue, it seems that the executive committee of the PCP Network Center under the 1st model of the MOU has less power than that of the 2nd model of the MOU. The function of the PCP Network Center executive committee under the 1st model of the MOU is similar to that of the coordinator. They are allowed only to integrate the performance plan of the PCP Network Center and to drive the PCP members to achieve the objectives that have been set in the performance plan. They do not have authority in administrative power, i.e., budgetary management, purchasing and employment, and other administrative resource distribution and management. For example, the executive committee of the Disaster Prevention and Mitigation Network Center in Kanchanaburi province coordinates with all four LGO members to set up the Disaster Prevention and Mitigation performance plan, the road map to achieving the Disaster Prevention and

Mitigation service. In the setting up the process of this plan, the executive committee's responsibility is only integrating the ideas of the LGO members about the action plan for handling the disaster situations. After the performance plan of Disaster Prevention and Mitigation service is finished, the executive committee of the Disaster Prevention and Mitigation Network Center simply response in both members and local residents to follow the Disaster Prevention and Mitigation performance plan in order to achieve the Disaster Prevention and Mitigation services. The difference in responsibilities of the PCP Network Center executive committee between the 1st and 2nd model of the MOU are shown in the below diagram.

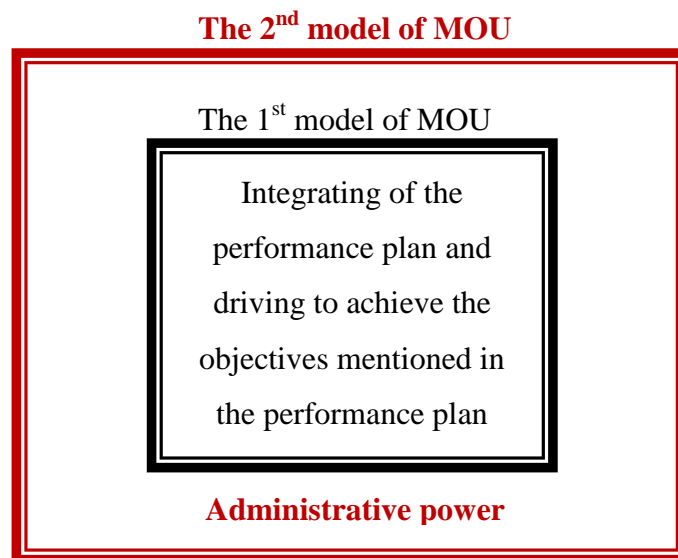


Figure 4.2 The Difference of the Responsibilities of the PCP Network Center Executive Committee Between the 1st and 2nd Model of the MOU.

From the above figure, administrative power, which includes, firstly, budgetary management, secondly, purchasing and employment, and finally, other administrative resources distribution and management, is a point of difference between the 1st and 2nd model of the MOU. The first administrative power is the budgetary management under topic 2 in table 1. The model of the MOU mentions the difference of budgetary management between the 1st and 2nd model of MOU in two conditions: the difference in budgetary stability level for the PCP Network Center activities in the future and in the responsibility level of the PCP Network Center

executive committee in budget management. Under the 1st model of the MOU, it seems that the stability level for PCP Network Center activity is less than that of the 2nd model of the MOU. For example, the budget that the 1st model of the MOU mentions comes from a “grant” of LGO members. The amount of expenditure budget is set up by the LGO members on a voluntary basis without mentioning the progressive rate for the next year, while the subsidy budget in the 2nd model of the MOU is annually set by referencing from the minimum financial status of the LGO members with a clearly mentioned progressive rate for the next year. In terms of the responsibility level of the PCP Network Center executive committee, the responsibility level of the PCP Network Center executive committee under the 1st model of the MOU is less than that under the 2nd model of the MOU. For example, under the 1st model of the MOU, all grants are allowed to be used in only Network Center activities that have been mentioned in the performance plan. The PCP Network Center executive committee cannot specify the types of Network Center activities that the grants will be used for. On the other hand, under the 2nd model of the MOU, the type of Network Center activities that the subsidy budgets will be defrayed for is the responsibility of the PCP Network Center executive committee. Specifically, the PCP Network Center executive committee makes a decision to delegate the subsidy budget to specific types of Network Center activities that it believes are suitable. The difference of budgetary management between the 1st and the 2nd model of the MOU is shown in the figures below.

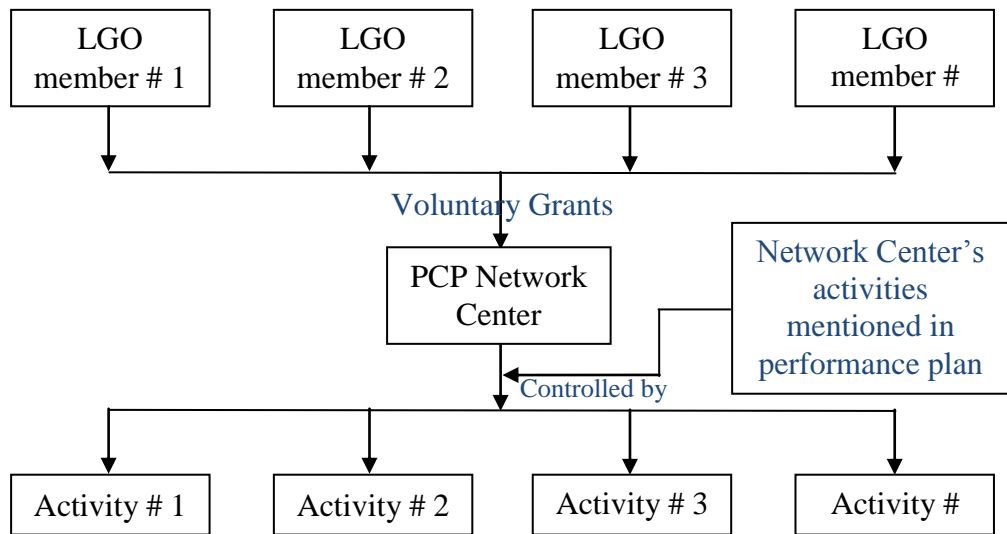


Figure 4.3 The Budgetary Management in the 1st Model of the MOU for Public Service Zoning of LGOs.

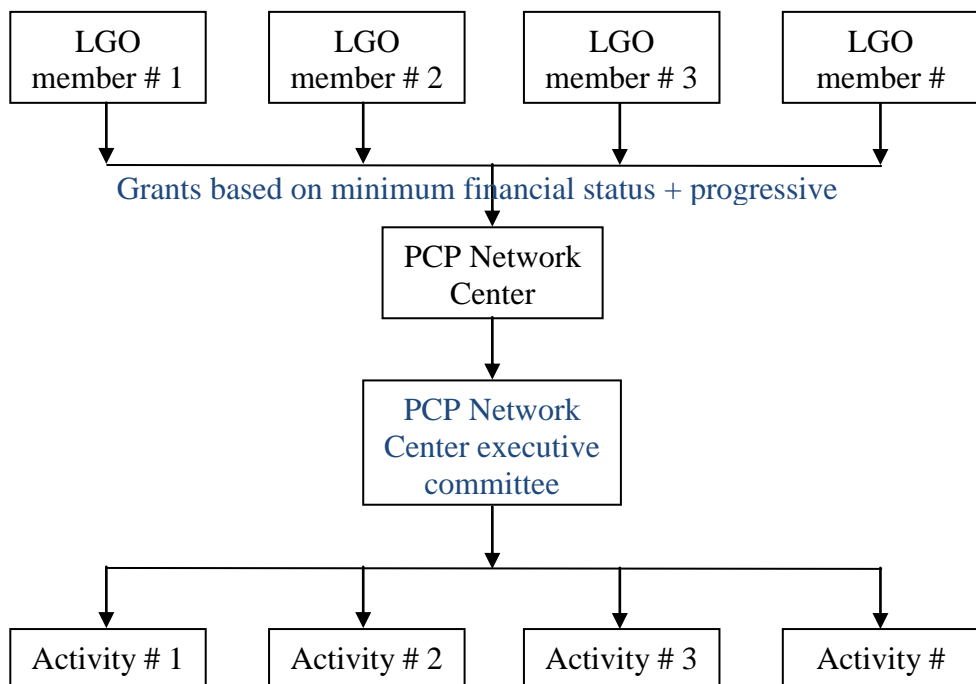


Figure 4.4 The Budgetary Management in the 2nd Model of the MOU for Public Service Zoning of LGOs.

In addition, differences in purchasing and employment between the 1st and 2nd model of the MOU as mentioned under topic 3 in Table 1 is, again, the authority level

of the PCP Network Center executive committee. Specifically, under the 1st model of the MOU, the PCP Network Center executive committee did not have authority to purchase things or to employ officers belonging to the PCP Network Center. Because the 1st model of the MOU allowed only the LGO itself to purchase stuffs and employ officers by itself, the PCP Network Center needed to utilize stuffs and officers from the LGO members when the Pilot Cooperated Project was run. For example, as mentioned in the guideline for repairing and maintaining public electricity through the Infrastructure Management PCP, if LGO members in Pluak Daeng district, Rayong province, wanted to repair the electric wires and bulbs, the materials for repairing had to be prepared by the LGOs who requested it. Machines and electricians for repairing were shared from other LGOs members that had them. Moreover, if machines damaged by Infrastructure Management activities, the LGO that requested the service had to respond with the repair expenses. From this guideline for repairing and maintaining public electricity through the Infrastructure Management PCP, it seems that eight LGOs members did not have a chance to get any help from the IM Network Center. All grants from the eight LGO members were planned according to the performance plan of the IM Network Center to be used in the center's activities. In the case of Koh Kha, Lampang province, as mentioned in the performance plan of the GM Network Center, the grants from four LGO members were not only used in the center's activities, but in repairing property and equipment that the four LGO members supported for the performance of the GM Network Center as well. As with the Pluak Daeng district, Rayong province, grants from four LGO members in the DPM Network Center, as mentioned in the performance plan and the MOU of the DPM Network Center, were planned to be used only in the center's activities. The repairing of equipment that four LGO members supported for the performance of the DPM Network Center was the responsibility of the LGO members that were the owners. Finally, the other administrative resource distribution and management was different from the 1st and 2nd model of the MOU. The difference was again concerning the authority level of the Network Center executive committee. The Network Center executive committee under the 1st model of the MOU did not have proprietary rights to the resources while the Network Center executive committee under the 2nd model of the MOU could distribute and manage administrative resources and properties to

the local government organization. Therefore, the executive committee of all PCPs in the three provinces seemed to have no authority to distribute and manage the resources.

The specific type of cooperative assignments assigned by the DOLA was another legal environment of the Pilot Cooperated Projects. The cooperative assignments assigned by DOLA like Top-down assignment because the specific type of cooperative assignment was originally set by the coordinating of three parties, DOLA, JICA, and Thammasat University without consulting to LGOs from 3 provinces. Moreover, although, there were three types of cooperative assignments, i.e. Garbage Management, Disaster Prevention and Mitigation, and Infrastructure Management designed by three parties, the DOLA, JICA, and Thammasat University, three provinces seemed to be unable to select the specific type of Pilot Cooperated Project that they understood would suit them. For example, although the LGOs in both Kanchanaburi and Plouk Daeng district, Rayong provinces preferred to cooperate with other LGOs in the Garbage Management PCP, they cannot select the specific type of PCP because the Garbage Management cooperated project was already assigned to Koh Kha, Lampang by DOLA and because the DOLA understood that the Garbage Management activities were necessary for the Koh Kha, Lampang people. The DOLA used the information about the Koh Kha, Lampang area, e.g. location and territory, economic data, etc., as their reference to set the Garbage Management for the PCP of Koh Kha, Lampang province. As with Koh Kha, Lampang, Kanchanaburi and Plouk Daeng district, Rayong was also assigned specific types of PCPs, Disaster Prevention and Mitigation and Infrastructure Management, respectively, by the DOLA. Again the DOLA used the information of both Kanchanaburi and Plouk Daeng districts in the Rayong area, e.g. location and territory, economic data, etc., as their reference to set up types of PCPs for the Kanchanaburi and Plouk Daeng district. That is why the specific types of Pilot Cooperated Project that all three provinces, Koh Kha, Lampang, Kanchanaburi, and Plouk Daeng district, Rayong, were assigned were not the cooperated projects that they originally preferred for themselves.

4.2 Common Needs Among Local Residents

Before the Tambon Administration Organization (TAO) system in Thailand was established, local residents from the four LGOs in Koh Kha, Lampang province, Koh Kha Tambon Municipality, the Ta Pa Tambon Administration Organization, the Sala Tambon Administration Organization, and the Koh Kha Tambon Administration Organization, and local residents in other LGOs outside Koh Kha, dumped their garbage in the public waste disposal area because of the amount of vacancy in the Koh Kha area. Because this public waste disposal area is nearest to Koh Kha Tambon Municipality when compared with the three other LGOs, the Ta Pa Tambon Administration Organization, the Sala Tambon Administration Organization, and the Koh Kha Tambon Administration Organization, this public waste disposal area was informally understood to belong to the Koh Kha Tambon Municipality. Therefore, the Koh Kha Tambon Municipality responded for all expenses of waste management. The position of the four LGOs in Koh Kha, Lampang, and the public waste disposal area, are shown in the figure below.

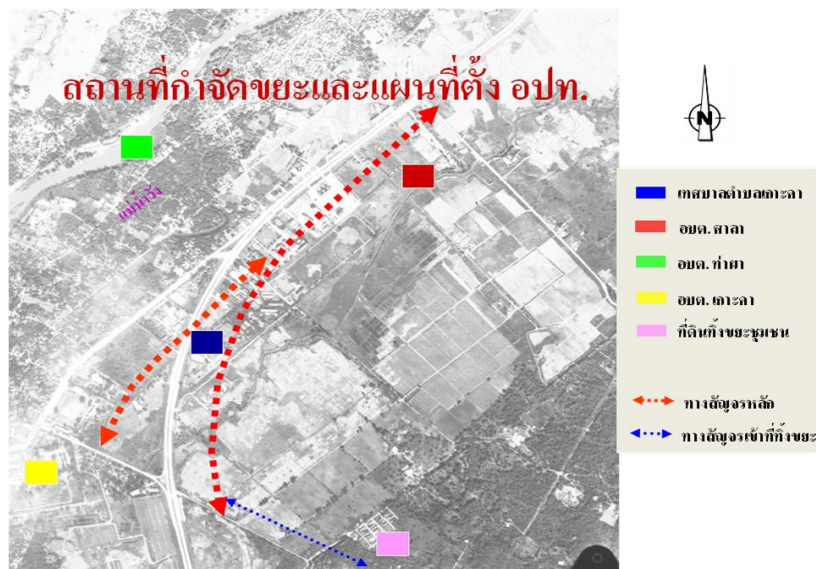


Figure 4.5 The Position of the Four LGOs in Koh Kha, Lampang and the Public Waste Disposal Area.

As time passed, after Tambon Administration Organization (TAO) system in Thailand was established, and the Koh Kha area was re-divided. After this re-divided, this public waste disposal area, relying on satellite information, came under the Sala Tambon Administration Organization area. Despite this, local residents from the four LGOs in Koh Kha, the Koh Kha Tambon Municipality, the Ta Pa Tambon Administration Organization, the Sala Tambon Administration Organization, and the Koh Kha Tambon Administration Organization, and local residents in other LGOs outside Koh Kha, still dumped their garbage in the public waste disposal area as before the Koh Kha area was re-divided. Moreover, despite it being legally under the responsibility of the Sala Tambon Municipality for all of the expenses of waste management in this public waste disposal area, the Koh Kha Tambon Municipality still response for it. The reason why Koh Kha Tambon Municipality still response for all expends is that according to a Koh Kha Tambon Municipality representative, “The position of the Koh Kha Tambon Municipality and public waste disposal area are nearest when compared to the three other LGOs, so we are the ones that receive the most effect of the unhygienic public waste disposal area such as waste smell, insects, etc., while the three other LGOs, the Ta Pa Tambon Administration Organization, the Sala Tambon Administration Organization, and the Koh Kha Tambon Administration Organization receive very little effect from the unhygienic public waste disposal area. Although, they still want to dump their garbage in this public waste disposal area as before, there is no one LGO that wants to be responsible for the waste management expenses on their own. That is why we must automatically be responsible for all expenses of waste management in this public waste disposal area.” It seems that the Koh Kha Tambon Municipality did not really want to be responsible for all of the expenses of waste management in public waste the disposal area alone after it realized that the public waste disposal area did not belong to it. After that, when the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed, the rights regarding such a public waste disposal area became an issue. The DOLA representatives, the Garbage Management PCP coach, stated that “The public waste disposal area should legally fall under the responsibility of the Sala Tambon Administration Organization. It should not only be the responsibility of the Koh Kha Tambon Municipality anymore. Koh Kha Tambon

Municipality must unfairly carry more burden for managing waste discarded from other LGOs.” Again, the Garbage Management PCP assignment was forcedly assigned to four LGOs in Koh Kha, Lampang province, the Koh Kha Tambon Municipality, the Ta Pa Tambon Administration Organization, the Sala Tambon Administration Organization, and the Koh Kha Tambon Administration Organization. After the Garbage Management PCP assignment was forcedly assigned to these four LGOs, the DOLA representatives called the meeting for all LGOs in Koh Kha, Lampang. According to the report of the meeting of the Garbage Management, the representatives from all four LGOs have completely joined the meeting. They feel excited about the Garbage Management PCP assignment. They clearly showed that they agreed with this Garbage Management PCP because they had proposed two requirements in the meeting; first, they still needed to have a waste disposal area where they could dump their garbage as before and secondly, they did not want to be responsible for all of the expenses of waste management alone. From the above information, we can come to a conclusion concerning the waste management of local residents in Koh Kha, Lampang, from before the TAO in Thailand was established until the Garbage Management PCP assignment was assigned by the DOLA, according to the following figures.

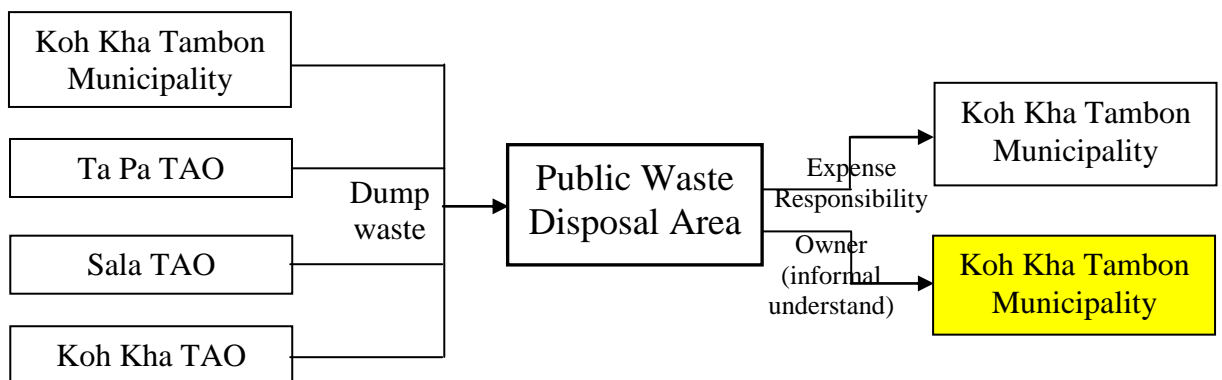


Figure 4.6 The Waste Management in Koh Kha, Lampang and Its Expenses Before the TAO System in Thailand was Established.

From Figure 4.6, it can be seen that the public waste disposal area was used by all four LGOs in Koh Kha, Lampang as their waste dumping area. All four LGOs in

Koh Kha considered this public waste disposal area as necessary because there was no another area in Koh Kha that could be used as a waste dumping area. Koh Kha Tambon Municipality voluntarily responded to all expenses of waste management because the Koh Kha Tambon Municipality informally understood that this public waste disposal area belonged to it. Moreover, due to the expenses that Koh Kha Tambon Municipality response is the package deal, the waste management expense did not depend on the quantity of waste, so the Koh Kha Tambon Municipality did not seem to be serious about who was dumping waste and how much waste was dumped in this public waste disposal area.

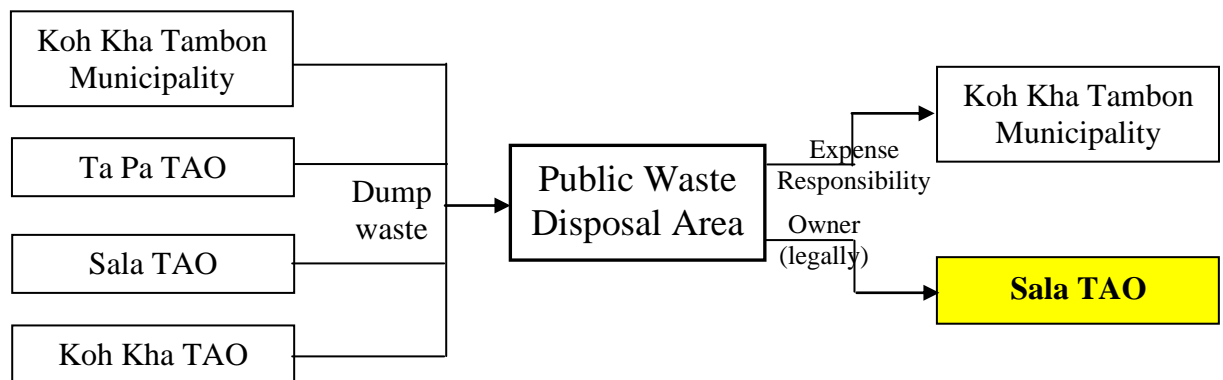


Figure 4.7 The Waste Management in Koh Kha, Lampang and Its Expenses After the TAO System in Thailand was Established.

From Figure 4.7, it is seen that although the public waste disposal area came to belong to the Sala TAO, all four LGOs in Koh Kha, Lampang still dumped their waste in this public waste disposal area as before. The four LGOs still considered this public disposal area as necessary because there was no another area in Koh Kha that could be used as a waste dumping area. Sala TAO, although realizing that this public waste disposal area belonged to it, still paid no expenses for waste management. It seems that the Sala TAO has some reasons to deny the waste management expenses. If we refer to the Koh Kha map in Figure 4.4, we can see that the Sala TAO stayed much farther from the public waste disposal area than the Koh Kha Tambon Municipality. If we suppose that the Sala TAO took no care for waste management expenses in this public waste disposal area, the Sala TAO shall receive fewer side

effects from the unhygienic waste disposal area than the Koh Kha Tambon Municipality. That is why the Sala TAO does not prefer to take responsibility for the expenses of waste management alone. On the one hand, the Koh Kha Tambon Municipality, because it stayed nearest to the public waste disposal area that received the most side effects from the unhygienic waste disposal area, must to involuntarily respond to all of the expenses for waste management.

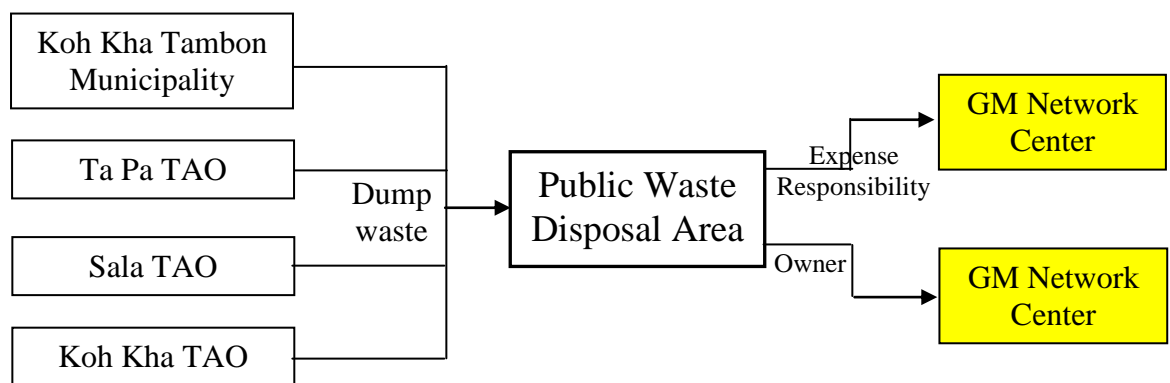


Figure 4.8 The Waste Management in Koh Kha, Lampang and its expenses when the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed

From Figure 4.8, it can be seen that the public waste disposal area was used by all four LGOs in Koh Kha, Lampang as their waste dumping area just as before the TAO system in Thailand was established. All four LGOs in Koh Kha considered this public waste disposal area as necessary because there was no another area in Koh Kha that could be used as a waste dumping area. According to the DOLA, to be fair to all four LGOs in Koh Kha, all expenses of waste management shall not only be under the responsibility of the Garbage Management Network Center, but Garbage Management Network Center shall be the owner of this public waste disposal area as well. The budget for the expenses of waste management comes from all four LGO members. Referring to the Transaction Cost Economics (TCE) and Resource Dependence Theory, all four LGOs have agreed with the information as provided in the diagram in Figure 4.7 as the DOLA guide. They considered the Garbage

Management PCP as a common need. One GM Network Center executive committee member stated that “We need the area to dump our waste. If there is no waste dumping area, it’s a big problem for us. This Garbage Management cooperated project that the DOLA implemented in Koh Kha is a very useful project for us. It’s not only that they legally have the waste disposal area but the expenses of waste management can be shared by all LGOs that utilize the waste disposal area.” Two other Pilot Cooperated Projects, Disaster Prevention and Mitigation and Infrastructure Management, were assigned to two other provinces, Kachanaburi and Plouk Daeng district, Rayong province, respectively.

The four LGOs in Kanchanaburi province, Kanchanaburi Town Municipality, Pak Praek Tambon Municipality, Ko Samrong TAO, and Tha Makam TAO, that were assigned for the Disaster Prevention and Mitigation cooperated project have had an informal relationship regarding the Disaster Prevention and Mitigation activities among them since before the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed. The social relationship among the four LGOs in Kanchanaburi province in Disaster Prevention and Mitigation activities are like the relationship between kinsfolk. Specifically, the Kanchanaburi Town Municipality, which has the steadiest financial status, personal availability and the highest number of modern instruments, was considered as the eldest “brother,” who needed to provide help to the others without any return, while the others were considered as the youngest “brother.” The LGOs that were considered as the youngest brother like to request help from eldest brother before considering helping themselves first. From an interviewing with the of Kanchanaburi Town Municipality Mayor, the DPM Network Center chairman, it seems that Kanchanaburi Town Municipality Mayor did not really want to support all disaster situations occurring in Kanchanaburi. Specifically, if there is more than one disaster situations occurred at the same time, he cannot handle to all situations. For example, if the disaster situations occurred in the Kanchanaburi Town Municipality and the other LGO areas at the same time, he would give command to handle the disaster situation in his area, the Kanchanaburi Town Municipality, first, and then continue to handle the other areas. Moreover, sometimes if the disaster situations occurred far from the Kanchanaburi Town Municipality, he did not allow his disaster prevention team to

handle the situation. He said in a face-to-face interview that “In the case of that a disaster situation occurred far from my area, if the disaster prevention team was allowed to handle this disaster situation but, at the same time, the disaster situation occurs at my area. It means that there is no one handle disaster situation in my area. So who will be responsible for this damage? For sure, the disaster prevention team did not allow going to handle the disaster situation that occurs at far my area is the best choice.” From the interview, it is clear that the Disaster Prevention and Mitigation chairman, the Kanchanaburi Town Municipality mayor, thinks that the Garbage Management PCP is more suited for Kachanaburi province than the Disaster Prevention and Mitigation PCP. He additionally said that “The Disaster Prevention and Mitigation PCP did not provide any benefit for my area. In the past, before the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was implemented, only my LGO provides help to others. My area did not have a chance to receive any help for others when the disaster situations occur. If the Disaster Prevention and Mitigation PCP was implemented to Kanchanaburi province, he thinks that residents under Kanchanaburi Town Municipality did not be able to receive any benefit from this project. Moreover, Kanchanaburi Town Municipality will help other LGOs more than before and legally. That is why he did not really agree with this type of PCP.” On the other hand, the three other 3 small LGOs, the Pak Praek Tambon Mucipality, the Ko Samrong TAO, and the Tha Makam TAO, fully agreed with this cooperated project. When the DOLA representatives called the 1st meeting, the three small LGO representatives looked more alert than the Kanchanaburi Town Municipality representatives, according to the progressive report of the Disaster Prevention and Mitigation PCP. Although they need to share their budget for this Disaster Prevention and Mitigation PCP, they said that they felt more confident to handle disaster situations than before. Moreover, because this Disaster Prevention and Mitigation PCP was a legally cooperated project among the four LGOs, they were able to receive help from the Kanchanaburi Town Municipality without an informal help request as before. A diagram of the Disaster Prevention and Mitigation service in Kanchanaburi province before and after the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed is shown in the following figures.

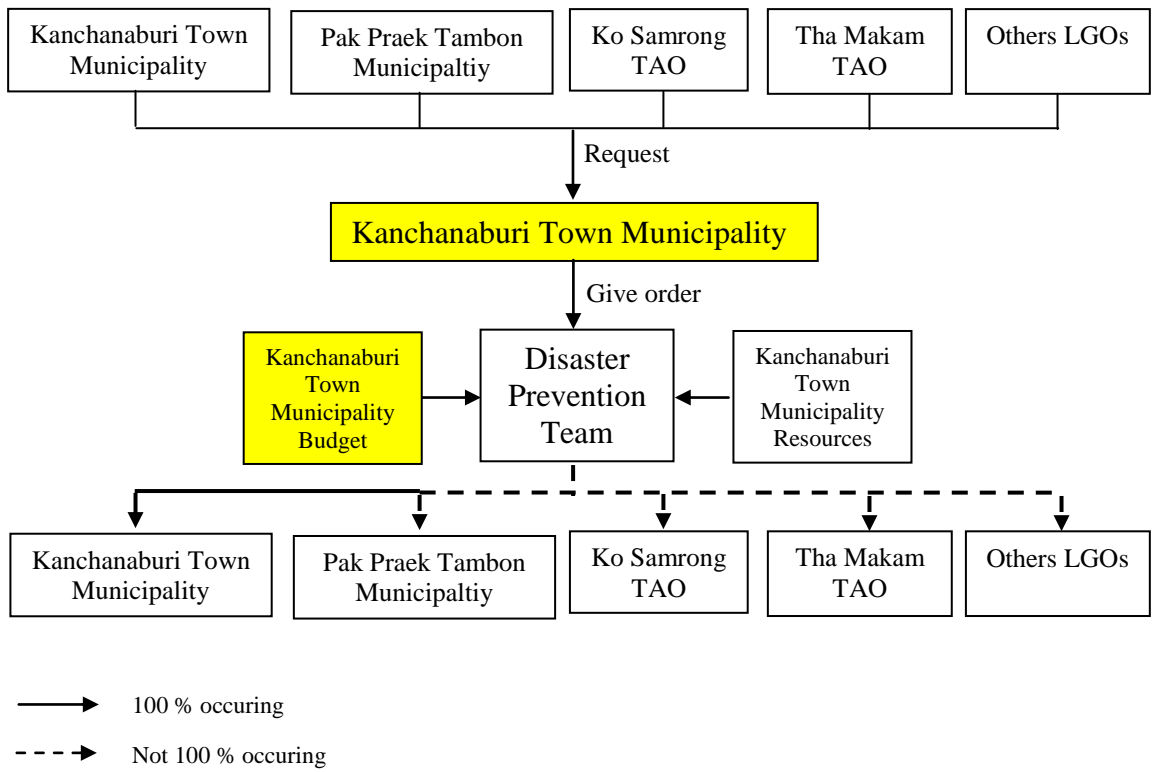


Figure 4.9 Disaster Situation Service of Kanchanaburi Province before the Disaster Prevention and Mitigation PCP was Implemented.

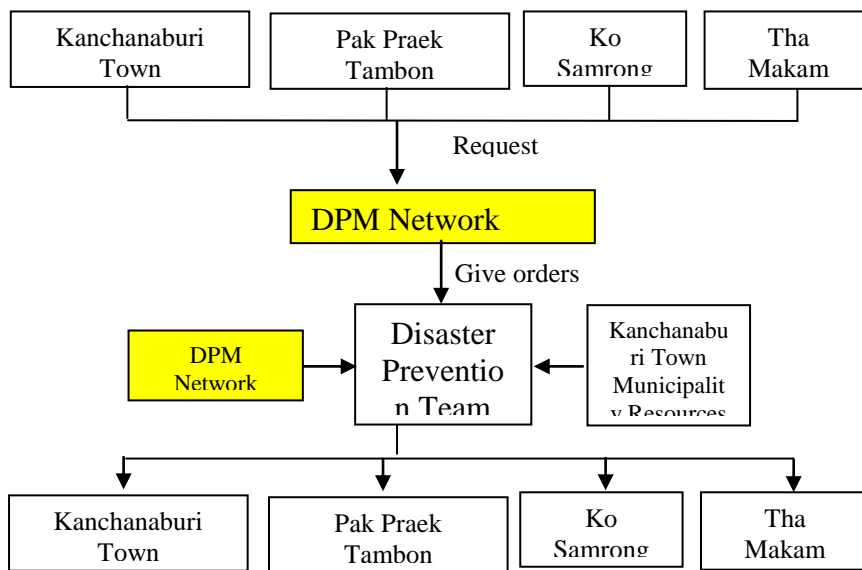


Figure 4.10 Disaster Situation Service of Kanchanaburi Province after the Disaster Prevention and Mitigation PCP was Implemented.

From the two above figures, it can be seen that there are two different points between them. The first point is the one entity that was requested from all LGOs for disaster service was the Kanchanaburi Town Municipality, as shown in the Figure 4.8, and the DPM Network Center as shown in Figure 4.9. Although, the disaster service requests of all LGOs were changed to be a request from the Kanchanaburi Town Municipality to the DPM Network Center, the Kanchanaburi Town Municipality Mayor was still the one that gave the command to the disaster prevention team. It seems that the Disaster Prevention and Mitigation PCP could not reduce their responsibility in disaster prevention activities. Moreover, the scope of the disaster prevention activities seems to more variety, i.e. not only disaster situation handling, but disaster prevention and mitigation was done as well. In terms of the budget for the Disaster Prevention and Mitigation activities, although, it was changed from the Kanchanaburi Town Municipality to the DPM Network Center responsibility, the budget could not be used for all activities, as mentioned in the 1st model of the MOU for public service zoning of the Local Government Organization. Therefore, Kanchanaburi Town Municipality still responded to all calls for disaster prevention and mitigation equipment and resources as before. That is why the Disaster Prevention and Mitigation PCP is not the project that the Kanchanaburi Town Municipality wants to implement in his area. Therefore, the Disaster Prevention and Mitigation PCP was not a common need of all LGO members in Kanchanaburi province. The last cooperated project that the DOLA set as a Pilot Cooperated Project was Infrastructure Management, which was assigned to the Plouk Daeng district, Rayong, to run the project.

Before the Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed, there was no activity about the infrastructure management occurring among the eight LGO members, Baan Plouk Daeng Tambon Municipality, Jomphonchopraya Tambon Municipality, Plouk Daeng TAO, Tasit TAO, Lahan TAO, Nongrai TAO, Maenamkhu TAO, or Mabyangporn TAO. There are various reasons why there was no infrastructure management activity occurring among these members; for example, the different needs of the infrastructure activities in this district depends on the various geographies of each LGO in the Plouk Daeng district, Rayong province, the problem of

From the information in the above table, it can be seen that there are different infrastructure activities that the LGOs in Plouk Daeng district need. For example, the Lahan TAO wants to construct and maintain a bridge, while the Nongrai TAO wants to construct and renovate the water supply system. This example of different required infrastructure activities does not allow them to cooperate with each other for common activities in infrastructure management. In addition, the problem of contracting with a private company for repairing infrastructure damage is another reason why cooperation among LGOs in Plouk Daeng district, Rayong province concerning infrastructure management has not occurred. Most contractors are not intent on contracting LGOs to operate maintenance projects because the project costs are lesser than new constructing projects. According to Resource Dependence Theory, an organization needs to cooperate with other organizations when it is sure that they have the resources, material resources, human resources, etc. they need and they also have the same objectives. On the other hand, an organization may have some resources, material resources, human resources, etc. that other organizations need. From the above information and according to Resource Dependence Theory, no LGO member in the Infrastructure Management PCP has any resources that other LGO members need. Moreover, they do not have the same goals regarding infrastructure management activities. That is why the Infrastructure Management PCP that the DOLA assigns to eight LGOs in Plouk Daeng district is not a common need.

The next factor shown in the conceptual framework is the attitude among local residents toward the cooperative network. This factor is the result of match/mismatch between the type of PCPs assignment assigned by the DOLA and the common needs of local residents. A match between the type of PCP assignment assigned by the DOLA and the common needs of local residents results in a positive attitude among local residents toward the cooperative network, while a mismatch between the type of PCP assignment assigned by the DOLA and the common needs of local residents results in a negative attitude among local residents toward the cooperative network. A more detailed discussion follows.

4.3 Attitude Among Local Residents toward the Cooperative Network

Because the Garbage Management PCP is a common need among the four LGO members in Koh Kha, Lampang, not only LGO administrators but also local residents have a positive attitude toward the PCP implementation of the DOLA under the Garbage Management project. This positive attitude of all four LGO administrators and local residents toward the Garbage Management PCP results in an open mind toward all activities that are implemented by the GM Network Center. According to Transaction Cost Economics (TCE) theory, organizations search to reduce the cost of their survival. If there is any means, i.e. cooperation with other organizations, sharing resources with others to run some specific project, etc., which able them to reduce costs, they will voluntarily attend to that means. In the case of Koh Kha, Lampang, we will see that all four LGO members did not want to be responsible for any of the expenses of waste management alone while all four LGO members wanted to utilize the public waste disposal area as before the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed by the DOLA. Once the DOLA assigned the Garbage Management PCP to these four LGOs in Koh Kha, both local residents and LGOs administrators in Koh Kha have fully agreed with its implementation because they could gain many benefits from this PCP, such as being able to use this public waste disposal area as before, not being responsible for all expenses of waste management alone, gaining income from the consequent activities implemented by the GM Network Center, etc. This full agreement of both local residents and LGOs administrators in Koh Kha allowed them to have a positive attitude toward this Garbage Management PCP, unlike in Kanchanaburi province, where not all four LGO members had a positive attitude toward the Disaster Prevention and Mitigation PCP.

Kanchanaburi Town Municipality, the biggest LGO among the four LGO members in the Disaster Prevention and Mitigation PCP, was the only LGO that had a negative attitude toward the Disaster Prevention and Mitigation PCP, while the three other small LGOs, Pak Praek Tambon Municipality, Ko Samrong TAO, Tha Makam TAO, had a positive attitude toward it. If the Transaction Cost Economics (TCE)

theory is again considered, Kanchanaburi Town Municipality exhibited the tendency to deny cooperation with the Disaster Prevention and Mitigation PCP because it seemed that it would lose benefits if the Disaster Prevention and Mitigation PCP was implemented in its area before the Disaster Prevention and Mitigation PCP was implemented. Both Kanchanaburi Town Municipality administrators and local residents believe that their resources, both human resources and equipment, are consumed for supporting the three LGO members, while the expenses for the Disaster Prevention and Mitigation activities are still shared with the Kanchanaburi Town Municipality. Moreover, Kanchanaburi Town Municipality shares the most percentage of the budget when compared with other LOG members. They stated that “Before the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed, we were able to control our Disaster Prevention team where we should go to handle the disaster situation, where they should not go. But now we cannot give a command to them. We have no choice. We must go to every LGO member area where the disaster situation has occurred. We have lost our administrators to work for the Disaster Prevention and Mitigation Network Center. Sometimes they did not have time to work in their direct responsibility.” On the other hand, three small LGO members, Pak Praek Tambon Municipality, Ko Samrong TAO, Tha Makam TAO, were able to gain more benefits from the Disaster Prevention and Mitigation PCP than before. They can legally receive the service of Disaster Prevention and Mitigation from the DPM Network Center instead of being refused by Kanchanaburi Town Municipality administrators. Moreover, although they must share some budget with the DPM Network Center, they are fully willing to do so because they can receive more services in Disaster Prevention and Mitigation than with the money that they share with the DPM Network Center. So there are differences in terms of the attitude among the four LGO members in the Disaster Prevention and Mitigation PCP; Kanchanaburi Town Municipality has a negative attitude, while three other LGOs, Pak Praek Tambon Municipality, Ko Samrong TAO, Tha Makam TAO, have a positive attitude toward the Disaster Prevention and Mitigation PCP. This attitude pattern of Kanchanaburi province concerning the Disaster Prevention and Mitigation PCP is different from that of the eight LGO members in Plouk Daeng district, Rayong province.

Because the Infrastructure Management PCP is not a common need of all eight LGO members in Plouk Daeng district, as mentioned above, all of these members have a negative attitude toward the Infrastructure Management PCP. All of them have the same attitude because they all believe that the Infrastructure Management PCP that the DOLA assigned to them cannot help them to improve their infrastructure when compared with the past. Again according to Resource Dependence Theory, an organization needs to cooperate with other organizations when it sure that they have the resources, material resources, human resources, etc., that it searches for and that they also have the same objectives. On the one hand, it also has some resources, material resources, human resources, etc., that other organizations need. According to their theory, none of the eight LGOs in Plouk Daeng district, Rayong province had the necessary resources, e.g., administrators that specialized in infrastructure management, equipment for fixing the infrastructure, negotiable power with private contractor companies, etc., for infrastructure management. This means that not one LGO in Plouk Daeng district, Rayong province was needed by others. There is no reason why the LGO wants to cooperate with other LGOs. Moreover, from interviewing the administrators in several LGOs in Plouk Daeng district, instead of working in their direct responsibility, they have to share their time in attending the monthly meetings of the IM Network Center with very low progress. They stated that “We must lose our time every month for no progress. Almost all issues discussed in the monthly meeting are discussed again and again in the next monthly meeting by those that did not attend the previous meeting. So it takes a very long time to close one infrastructure management issue.” Moreover, all eight LGO members need to share their money for the IM Network Center budget, while this budget cannot be utilized in all activities of the IM Network Center as mentioned in the 1st model of the MOU for public service zoning of the Local Government Organization. According to this information, there is no reason why any of the eight LGO would have a positive attitude toward the Infrastructure Management PCP.

From above information, it can be concluded that when the type of PCP assignment assigned by the DOLA matches with the common needs of local residents, it means that the DOLA selects the type of PCP assignment that local residents require. In general, when the project assignment assigned to local residents is the

project that they preferred to do in the past, of course, they will consider the project as a valuable one. Moreover, they will think that they can gain benefits from the project; and when they believe that they can gain benefits, they will have a positive attitude toward the project. On the one hand, if the type of PCP assignment assigned by the DOLA does not match with local residents' requirements, it seems that the local residents will consider the project as valueless. In addition, they will think that there is no benefit to be gained from the project. Basically, when there is no benefit that the local residents can gain from a project, they will have a negative attitude toward that kind of project. Moreover, they seem to participate in the project activities at a low level, which is the next factor in the conceptual framework.

4.4 Level of Local Residents' Participation

Before the Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed, local residents in Koh Kha, Lampang had participated in many public activities, such as the utility association in big projects, for example, dike construction, draining gutter construction, mine digging, and electric pumping station among the four LGOs, etc. When the Project on the Capacity Building of Local Authorities through Local Public Standard and Local Cooperation was performed, there were many activities that the Koh Kha, Lampang residents participated in regarding the Garbage Management PCP, such as preparing announcement signs about the Garbage Management PCP, participating in repeated meeting on waste sorting, participating in the rostrum community, participating in waste bank projects, a "save the earth" project, the "Wong river renovation" project, etc. At the start of the Garbage Management PCP, to officially notify local residents in Koh Kha, Lampang about Garbage Management PCP, an announcement sign about the Garbage Management PCP needed to be prepared. Because this sign was voluntarily prepared by the local residents from the four LGOs themselves, it implies that local residents in Koh Kha, Lampang wanted to participate in this PCP. After the sign was prepared, how to manage the waste in the Koh Kha, Lampang area was the next action that the GM Network Center needed to take. Therefore, educating the local residents in Koh Kha about how to sort waste was

the GM Network Center's means. The waste sorting brochures were prepared by the GM Network Center officers in order to educate local residents about the types of waste in their house, how to sort them correctly, and how to gain income from their useless waste. The waste sorting brochures that were distributed to all local families in Koh Kha, Lampang allowed them to better understand their waste, which resulted in almost all of them participating in repeated waste sorting meetings. This situation allows us to understand that local residents in Koh Kha, Lampang have a high level of participation in the Garbage Management PCP. After these local residents participated in the meetings, a committee on the waste sorting project was established. Many local residents from all four LGOs in Koh Kha voluntarily applied for candidacy. After they were selected, they created many waste management activities, for example, setting a rostrum for local residents about waste management issues, etc. A lot of local residents from the four LGOs participated in this waste management rostrum. From this rostrum, there were many consequent activities concerning waste management, such as a waste bank, a save the earth project, training of environmental protection for volunteers, a wong river renovation project, a reducing global warming project, a clean city project, etc. From the above information of activities that local residents in Koh Kha, Lampang had participated in from before the Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed until the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was been introduced to Koh Kha, Lampang, we can see that there was some construction of "trust," "commitment," and "loyalty" among Koh Kha, Lampang local residents. This development of trust, commitment and loyalty among the Koh Kha, Lampang local residents that drove them to participate in almost all of the activities that were generated in their local area, i.e., the activities were created by one LGO in Koh Kha, Lampang, while other LGOs in Koh Kha, Lampang not only participated in these activities but give support as well. This indicates a strong linkage LGO-to-LGO (Morgan & Hunt, 1994), which resulted in a high level of local resident participation in Koh Kha, Lampang. Unlike Koh Kha, Lampang, local residents in Kanchanaburi have exhibited less participation.

As mentioned above, before the Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed,

there were some informal relationships among LGOs in Kachanaburi province regarding, for example, fire prevention, etc. This fire prevention activity was an informal relationship, a one way relationship; specifically, only big LGOs in the Kanchanaburi Town Municipality had to provide supports for other smaller LGOs, Pak Praek Tambon Municipality, Ko Samrong TAO, and Tha Makam TAO, without any return. Only Kanchanaburi Town Municipality resources, officers, fire controlling machine, etc., were used for all activities occurring among the LGOs. This one-way informal relationship among the LOGs in Kanchanaburi province in the past has allowed local residents in Kanchanaburi Town Municipality to understand that they lose resources when supporting others. If these resources were used to develop their own area instead of being utilized for others, their area would be more developed in many dimensions. This kind of one-way informal relationship can create some negative attitudes among local residents in the Kanchanaburi Town Municipality area in terms of cooperating with other LGOs that had lower status than them. On the one hand, the one-way informal relationship allowed local residents from the three other small LGOs, Pak Praek Tambon Municipality, Ko Samrong TAO, and Tha Makam TAO, to receive supportive from the Kanchanaburi Town Municipality without giving any returns to the Kanchanaburi Town Municipality. All supports that small LGOs ask for will not be responded to by the Kanchanaburi Town Municipality. It is depending on the decision of the Kanchanaburi Town Municipality, which is the owner of all resources. If there is no support from the Kanchanaburi Town Municipality, they cannot protest against the Kanchanaburi Town Municipality. In order to able to receive more disaster prevention service from the Kanchanaburi Town Municipality than before, all three small LGOs, Pak Praek Tambon Municipality, Ko Samrong TAO, and Tha Makam TAO, need to have formal cooperation with the Kanchanaburi Town Municipality. Local residents' in Pak Praek Tambon Municipality, Ko Samrong TAO, and Tha Makam TAO want to participate in all activities that Kanchanaburi Town Municipality sets while local residents in the Kanchanaburi Town Municipality do not want to do so. When the Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was forcedly assigned to four LGOs, Kanchanaburi provinces, Kanchanaburi Town Municipality, Pak Praek Tambon Municipality, Ko Samrong

TAO, and Tha Makam TAO, under the Disaster Prevention and Mitigation, the local residents in the three small LGOs showed a high level of participation in this Disaster Prevention and Mitigation PCP, while local residents' in Kanchanaburi Town Municipality did not want to participate in the Disaster Prevention and Mitigation PCP. If the Resource Dependence theory and Institutional theory are considered, all organizations basically need to survive under the environmental constraints. Organizations that do not have the resources that they need for survival need to search for resources, while organizations that have all of the resources that they need to survive do not want to search from others. One thing that organizations that lack the resources they need can do is to try to merge with other organizations that have the resources they are looking for under some conditions that they both can accept. Organizations that have all of the resources they need may merge with others because for some other reasons, i.e., social reasons, for example, schemas, rules, norms, routine, etc. In the case of the Disaster Prevention and Mitigation PCP that was forcedly assigned by the DOLA, the Kanchanaburi Town Municipality as the organization that had all of the resources that it needed. It did not want to cooperate with others under the resource requirement reason but it cooperated with other LGOs for social reasons; for example, it wanted the DOLA and three other LGOs to accept it, it is a norm for Kanchanaburi province that the one that has the steadiest status needs to help others. The three other LGOs, Pak Praek Tambon Municipality, Ko Samrong TAO, and Tha Makam TAO, On the other hand, are organizations that did not have the resources they needed. They need to cooperate with the Kanchanaburi Town Municipality in order to formally receive the Disaster Prevention and Mitigation services. For these reasons, local residents from the three LGOs that are the members of the Disaster Prevention and Mitigation PCP demonstrated a high level of participation in this Pilot Cooperated Project, while local residents from the Kanchanaburi Town Municipality showed a low level of participation. Unlike the local residents of Koh Kha, Lampang, and Kanchanaburi, almost all of the local residents of Pluak Daeng district, Rayong had a low level of participation in the Infrastructure Management PCP.

As mentioned above, the Infrastructure Management PCP that was assigned by the DOLA did not represent a common need of all eight LGO local residents in

Pluak Daeng district, Rayong province. If, again, the Institution theory is considered, all eight LGO members in the Infrastructure Management PCP did not really want to cooperate with others but they had to. The Infrastructure Management project was not their common need but they had to run this PCP because all of them wanted the DOLA to accept them for social reasons. In Thailand, almost all projects that the government creates and assigns to an organization need to follow without any denial. If organizations deny the assignment from the government, they will be socially punished the other organizations.

From the above information, it is seen that all local residents of the three provinces participated in the PCP assignment assigned by the DOLA because of customary practice; specifically, all local residents had to participate in all projects that government assigned to them without refutation. Local residents that turned down the project of the central government will be considered as unconventional people. Nevertheless, from the study it was seen that the level of local residents' participation depends on two factors; number of parties/actors involved in the cooperative network and the match/mismatch between leadership style and orientation towards cooperative behavior, which is discussed in the following.

4.5 Number of Parties/Actors Involved in the Cooperative Network

The Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was established through the cooperation among three parties, The Department of Local Administration, the Japan International Cooperation Agency, and the Faculty of Political Science at Thammasat University. The cooperation objectives were for studying and recommending the directions for establishment of the cooperative organization by concentration on Local Government Organizations. This project was performed by selecting three study cases, i.e., the Local Government Organizations in Lampang, Kanchanaburi, and Rayong. The Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation has many standards for setting the project. The Local Government Organization in the same zoning area of each province is one guideline that is used to select the LGO members in terms of joining the cooperated project. The

LGOs that are in the same zone are selected as members of the Pilot Cooperated Project. The four LGOs, Koh Kha Tambon Municipality, Ta Pa TAO, Sala TAO, and Koh Kha TAO, under area zoning LP07 were selected as members of the Garbage Management PCP. Unlike Koh Kha, Lampang, Kanchanaburi province has three LGOs, Kanchanaburi Town Municipality, Pak Praek Tambon Municipality; and Ko Samrong TAO from KJ03 and one LGO, Tha Makam TAO, from KJ04, are the LGO members of the Disaster Prevention and Mitigation PCP. Like Koh Kha, Lampang, eight LGOs, Tambon Jomphonjaopraya Municipality, Tambon Baanploukdang Municipality, Mabyangporn TAO, Plouk Daeng TAO, Tasit TAO, Maenamkhu TAO, Lahan TAO, and Nongrai TAO, from only one zone, are LGO members of the Infrastructure Management PCP. As indicated in the study, the number of LGO members in the PCP results the flexibility of PCP Network Center. The four parties/actors involved in the Garbage Management PCP can create flexibility for the GM Network Center, resulting in activities towards the Garbage Management that can be run thoroughly. The activities that the GM Network Center sets can be approved by all four LGO members in a short time, which results in all Garbage Management activities being implemented by local residents quite fast. This quick movement of Garbage Management activity implementation, together with a high level of Koh Kha, Lampang local resident's participation in the Garbage Management PCP, results in the GM Network Center having a chance to implement more consequent activities for Koh Kha, Lampang local residents, for example, a recycle waste bank, fertilizer from wet waste, a dry and hazardous waste separation project, environmental protection training, a clean city project, an oil trap tank, the Wong river renovation project, the waste donation project, etc. The recycle waste bank was the first successful project of the GM Network Center. Almost all local residents from the four LGOs in Koh Kha, Lampang are members of this recycle waste bank. Local residents of the four LGOs in Koh Kha, Lampang have more knowledge about types of waste, how to categorize different types of waste, and how they can gain benefits from different types of waste; for example, recycled waste can be sold to gain income, wet waste can be fertilized into fertilizer and Methane gas. The dry and hazardous waste separation project allows local residents in the four LGOs in Koh Kha, Lampang to correctly separate dry and hazardous waste from other types of waste, which results them to safe from

incorrectly handle hazardous waste. Moreover, there is a training program on environmental protection for children in Koh Kha, Lampang, which is set by the Garbage Management committee. This program has gained the interest a lot of children in Koh Kha, Lampang. These children voluntarily applied for the environmental protection program. Information about the Garbage Management PCP is also contained in this training program. After children are trained in environmental protection, they not only have knowledge about their environment but they also feel anxious about their environment, according to diagrams that children draw when the environmental protection training program is finished. Clean city project is another consequent project that the Garbage Management Network Center implemented for local residents in Koh Kha, Lampang. There is a reward set for this project. Almost all of the families in Koh Kha join this program. In addition, in order to maintain the water quality in Wong River, there must to pour no waste matter into it, so the oil trap tank project was implemented by the Garbage Management PCP. A lot of the oil trap tanks were prepared by the GM Network Center for not only every family in Koh Kha, but for all restaurants in Koh Kha as well. After all of the oil trap tanks were used, the water quality in Wong River is better. The above examples of subsequent projects that the Garbage Management Network Center implemented with local residents show that there are a lot of activities that the Garbage Management Network Center can implements for local residents, which reflects the flexibility of the Garbage Management Network Center. Like Koh Kha, Lampang, Kanchanaburi also has four LGO members, although they are in a different zone, in the Disaster Prevention and Mitigation PCP. These four LGO members create high flexibility for DPM Network Center in carrying out Disaster Prevention and Mitigation activities. All of the DPM Network Center monthly meetings and DPM activities can be agreed on and concluded within a day. For example, when the next monthly meeting of the DPM Network Center needs to be set, the meeting date can be the day that the DOLA has proposed every time. The four LGO members try to adjust their schedule in order to match the proposed date. Another example that reflects the flexibility of the DPM Network Center is that all eighteen Disaster situations occurring in the four LGOs in three years could be handled by the Disaster Prevention and Mitigation Network Center. Moreover, a training program about how to handle Disaster situations for the

local residents in the four LGOs was also set up. A lot of volunteers from all four LGOs applied for this training program, which could be set up quickly – it was set up two times. The above examples of DPM activities reflect the flexibility of the DPM Network Center. Unlike both the GM Network Center in Koh Kha, Lampang and the DPM Network Center in Kanchanaburi, the IM Network Center in Plouk Daeng district, Rayong in not flexibility in carrying out its infrastructure management activities. Eight LGO members in the Infrastructure Management PCP, Jomphonjaopraya Tambon Municipality, Baanploukdaeng Tambon Municipality, Mabyangporn TAO, Plouk Daeng TAO, Tasit TAO, Maenamkhu TAO, Lahan TAO, and Nongrai TAO, seemed to too many members for a cooperation project, although they were all in the same zone. There are various examples that reflect the inflexibility of IM Network Center; for example, the monthly meeting date of the IM Network Center could not be finally set within a day, the IM activities were discussed again and again in the next monthly meeting, etc. The eight LGO members could conclude for the next monthly meeting date. When the next monthly meeting date was proposed by the DOLA, they took no action for adjusting their schedule. They insisted that they already had another duty that day so the next monthly meeting date was never decided upon. The next monthly meeting date was always concluded and confirmed by the DOLA too late. Moreover, in every monthly meeting, not all eight LGO member representatives attended. That is why almost all of the IM activities that were already approved in the previous monthly meeting by the IM Network Center committee were discussed again and again by the committee members, who did not attend the previous monthly meeting. This resulted in the IM activities being delayed. Moreover, although one IM activity was approved by all IM Network Center committee members, the real action, again, seemed to be slow because it could not be concluded in terms resource usage; for example, the activity of fixing electric bulbs in Jomphonjaopraya Tambon Municipality was approved by the IM Network Center committee in February, 2006 but they were fixed only in May, 2006 because the Jomphonjaopraya Tambon Municipality needed to borrow the machine needed for repairs and an electrician from the other LGOs that had them, because they cannot finalize about the fixing machine and electrician. Specifically, the issue of borrowing the machine and electrician was discussed in the monthly meeting but could not be

concluded in the first meeting. Again, this issue was discussed again in the next monthly meeting until all IM Network Center committee members agreed with the issue. This shows that there is some inflexibility in the IM Network Center resulting from too many LGO members. The above three Pilot Cooperated Projects, Garbage Management, Disaster Prevention and Mitigation and Infrastructure Management, in the provinces, Koh Kha, Lampang, Kanchanaburi, and Plouk Daeng district, Rayong, show that more members in the cooperation Network Center can create more variety of cooperation in the Network Center. The greater the variety of cooperation in the Network Center, the more ideas will be generated. The more ideas created in the cooperation Network Center, the slower the decision-making activities there will be.

4.6 Orientation towards Cooperative Behavior, Leadership Style and Match between Orientation towards Cooperative Behavior and Leadership Style

From the above information on the level of Koh Kha, Lampang local residents' participation, local residents there have a "cooperative" orientation towards cooperative behavior. Because all tambons in Koh Kha district are partly in the country, although there are some industries generated in the Koh Kha area at the present time, most residents are in the agricultural sector. Moreover, the lifestyle of almost all Koh Kha residents is still concerned with Buddhist religion and has a strong personal relationship with them as their original culture. It is also true for the four LGOs that were assigned for the Garbage Management PCP. With a strong informal relationship of Koh Kha local residents in the four LGOs, Koh Kha Tambon Municipality, Koh Kha Tambon Administrative Organization, Ta Pha Tambon Administrative Organization, and Sala Tambon Administrative Organization, it is not necessary to have a strict (formal) pattern to link with local residents when some activities are held commonly among these communities. There are a lot of cooperated activities occurring among all four Local Government Organizations since before the Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed. For example, local Koh Kha residents engage in activities associated with utility management such as dike construction, drain gutter

construction, mine digging and electric pumping stations, most of which are performed outside their own areas. For example, Ta Pha TAO wanted to build an electric pumping station in their own area, but the owners of the areas are people under the responsibility of the Koh Kha Tambon Municipality. Therefore, the Ta Pha TAO cooperated with Koh Kha Tambon Municipality to build the electric pumping station in order to allow local residents to receive advantage from it. For another example, Koh Kha Tambon Municipality asked for permission to dig mines in the Ta Pa TAO, including constructing draining gutters, and a budget was to be allocated the Ta Pa TAO to invest in performing these activities; in other words, Koh Kha Tambon Municipality was the investor whereas Ta Pa TAO provided the area. Furthermore, there were activities in arranging meetings for the occupation associations, i.e., each local government organization gave knowledge to the visitors both about its own locality and about the locality of the three other LGOs, including taking them to visit both its own locality and others' locality. Besides the local residents in Koh Kha, Lampang, the leaders of Koh Kha, Lampang also have a "cooperative" orientation towards cooperative behavior, especially the mayor of Koh Kha Tambon Municipality who is the GM Network Center. When the Garbage Management PCP was assigned to Koh Kha, Lampang, she participated in all programs those were implemented in the community. For example, she made public relations inform residents in the localities about the performance plan of the GM Network Center by herself, she gave the idea to create a waste sorting brochure to communicate with the local residents about how to sort the waste, how to make fertilizer from waste, she participated in the "battlefield" by herself, she gave equipment for waste sorting to the local residents by herself, etc. Although the meeting of Garbage Management PCP needs to do in the evening time due to time availability of local residents, she gave her full participation to these activities. Specifically, she joined and led the waste sorting suggestion meeting by herself. Moreover, the Garbage Management committee was appointed with the participation of the GM Network Center chairman. In addition, she was the leader for various public activities, e.g. making signboards, media, and documents to provide knowledge to the communities, arranging village conferences and community conferences, including garbage management competition among villages, environment protection volunteer training, waste collector training, the oil matter

trapping project, the Wong River renovation, waste donation, the save the earth project, etc. Her participation style resulted in all administrators, local government executives, local councilors, government officers, and local residents participating in the GM Network Center activities with their full capacity as well. In addition, with not enough support of knowledge or information about garbage management from the central government, the DOLA and leaders and administrators of the GM Network Center continued to carry out their activities by using their own knowledge and the information that they had. They tried to use their knowhow and own information to run the activities without waiting for knowledge and information from the central government. The competency administrator, Mr. Chawarn Kaewlue, the committee & secretary of the GM Network Center, who is normally in the position of the officer acting as the director of the division of public health and environment in the Koh Kha Tambon Municipality, was the main person giving knowledge to the communities regarding waste management, for example, teaching them how to categorize waste into the collect group, how to make fertilizer from wet rubbish, how to make water organic fertilizer, how to make fertilizer by digesting wet rubbish by the worm method, how to make methane gas from wet waste fermentation, etc. During the Garbage Management PCP operation for three, the chairman of the GM Network Center stayed for the full term. Moreover, the communication style of the leader is another factor that had an effect on the match between the orientation towards cooperative behavior of Koh Kha, Lampang local residents and the leadership style. The leader of the garbage management PCP project had both a one-way and two-ways communication style, which matched the “cooperative” orientation towards cooperative behavior of Koh Kha, Lampang local residents. Specifically, when a leader’s communication style matches the local residents’ expectations, the local residents will have higher communication satisfaction with the leader. The local residents’ expectations refer to the expectations of local residents regarding leadership decision-making styles. The residents’ expected these leadership decision-making styles are associated with their orientation. If we consider the local residents in Koh Kha, Lampang province, they have a “high level of public awareness.” They are also happy to help others without any expectation of returns. They have high tentativeness to voluntarily cooperate with the cooperative network. However, the local Koh Kha

residents need strong suggestions from local leader as well because they still have low knowledge about garbage management. If they can receive strong technical knowledge about this management with a participative style from local leader, they will feel confident and comfortable in doing the Garbage Management PCP. Fortunately, the leadership and communication style of local GM Network Center chairman was “participative,” which matched with her local residents’ orientation towards cooperative behavior. Moreover, there were enough administrators that had strong technical knowledge to support the local residents. These are the key points of local good performance of the GM Network Center in Koh Kha, Lampang province.

Like the local residents in Koh Kha, Lampang, Kanchanaburi residents also exhibited some informal relations in both personal and public activities since before the Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed. Basically, Kanchanaburi local residents prefer to help others if they can. They like to be part of others even if it is not their concern. Moreover, they prefer to have no conflict with others. Local Kanchanaburi residents believe that those that have more “seniority” should help others. From the Kanchanaburi local residents’ behavior, it seems that the orientation towards the cooperative behavior of Kanchanaburi residents is “cooperative.” When the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was implemented, the chairman of the DPM Network Center in Kanchanaburi, Mr. Prasit Opastipakorn, was the Mayor of Kanchanaburi Town Municipality and had the “autocratic” characteristics. While running the Disaster Prevention and Mitigation PCP, he acted as the eldest brother, who not only provided help such as fire engines and firefighters to the rest of the parties but provided consultation on Disaster Prevention and Mitigation management as well. For example, he gave strong suggestions to the parties/actors in the monthly meeting as to how to manage the disaster situations accidentally occurring in each parties/actors’ area, what the plan for Disaster Prevention and Mitigation for all parties/actors was, and also set the direction of the DPM Network Center. His “autocratic” style, although there were some administrators that wanted to participate in the monthly meeting, resulted in all administrators, local government executive, local councilors, and government officer not being able to add any comments to the DPM Network Center because of his

awfulness. Moreover, because the local residents could not participate, they did not have a chance to provide any comments to the DPM Network Center. Again because of the characteristics of DPM Network Center's chairman and his confidence, he continued to run the Disaster Prevention and Mitigation Network Center without any support of knowledge or information about the Disaster Prevention and Mitigation from the central government, the DOLA. Because there is no administrator among the parties/actors that had direct knowledge about the Disaster Prevention and Mitigation, almost all training programs about Disaster Prevention and Mitigation occurred by hiring private sector that specialized in Disaster Prevention and Mitigation. During the running of the Disaster Prevention and Mitigation PCP for three years, the chairman of the DPM Network Center stayed for a full term. Moreover, the communication style of the leader and administrator as another factor that had the most effect on the match between the orientation towards cooperative behavior of Kanchanaburi local residents and leadership style. The leader of the Disaster Prevention and Mitigation PCP has only a one-way communication style, which failed to match the local residents' orientation towards cooperative behavior. If the leader's communication style matches the local residents' expectations, the local residents will have higher communication satisfaction with the leader. The local residents' expectations mean the expectations of residents regarding leadership decision-making styles. The residents' expected the leadership-decision making styles to be associated with their orientation towards cooperative behavior. If we consider the local residents in Kanchanaburi province, they have a "cooperative" orientation towards cooperative behavior. They are happy to use their life without any conflict with others. In addition, Kanchanaburi residents also need strong suggestions from the leader because they still have low knowledge about Disaster Prevention and Mitigation. If they can receive strong technical knowledge about Disaster Prevention and Mitigation with a democratic style of cooperation from the leader, they will feel confident and comfortable in carrying out the Disaster Prevention and Mitigation PCP. Unfortunately, the leadership style and communication style of DPM Network Center chairman was pure "autocratic," which seemed not to match with the Kanchanaburi local residents' orientation towards cooperative behavior. Moreover, there were not enough administrators that had strong technical knowledge about Disaster Prevention

and Mitigation to support the local residents. This is another key point affecting the performance of the Disaster Prevention and Mitigation PCP.

Unlike the local residents in Koh Kha, Lampang and Kanchanaburi, Pluak Daeng district, Rayong local residents have a “political” environment, resulting in having individualistic behavior. They prefer not to cooperate with others and when they do it much be done via standards. The local Pluak Daeng district residents have a “non-cooperative” orientation towards cooperative behavior. With these “non-cooperative” characteristics, they have their own beliefs about doing what they think is good. Moreover, their behavior is persistent and self-confident not to be a good listener. They like to act as the center of everyone. They believe that their ideas are better than those of others and that others should follow them. Therefore, the local residents in Pluak Daeng district, Rayong province are less open mine to others, unless they are in the same group as them. This behavior results in a low level of sharing among the community and fewer successes group activities there as well. For example, there is one unofficial cooperated project, the Garbage Management project that was built in the area of Pluak Daeng district, Rayong. In this project, each LGO sent its representatives to participate in the project as the project committee. The project committee went to study the operation of the Garbage Management to find guidelines for building for the landfill pit for the LGOs in Pluak Daeng district. The committee went to study the operation, although this project was initiated according to the needs of the LGOs themselves. There was no continued activity of this Garbage Management project. The subject was then neglected until the conference of IM Network Center committee, when it was discussed again. This example confirms that the local Pluak Daeng district residents have a “non-cooperative” orientation towards cooperative behavior. When the Project on the Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed, the Infrastructure Management PCP was assigned to eight LGOs in Plouk Daeng district. The Chairman of the IM Network Center, Mr. Wichai Tahnbamrungrak, is the Mayor of Pluak Daeng Tambon Administration Organization that has a “free reign” characteristic. In the Infrastructure Management PCP, he seems to participation little. For example, he was frequently absent from monthly meetings. Moreover, he provided little valuable suggestion when he did attend the monthly meetings because

he believed that every local government in the Infrastructure Management PCP could manage its own area with good enough performance. Each LGO can survive by itself without relying on other support. That is why he seemed to make less effort for the Infrastructure Management PCP. Specifically, he did not lead in any activity held in the parties/actors' areas. His "free-reign" style resulted all administrators, local government executives, local councilors, government officers, and local residents not making an effort to participate in the IM Network Center activities at their full capacity as well. With not enough support of knowledge and information about Infrastructure Management from the central government, the DOLA, it resulted in the leader and administrators of the IM Network Center continuing to run the activities with a low level of knowledge and information. Although the IM Network Center had Dr. Somkiat Jongjitman as a committee member and secretary, he was not a technician specializing in infrastructure issues. He also needed to consult the private sector for technical help. It seems that only Dr. Somkiat Jongjitman, the key person of the IM Network Center, tried to push the IM Network Center to be effectively run, which seems impossible. During the operation of the Infrastructural Management PCP for three years, the chairman of the IM Network Center did not stay for a full term. Moreover, the communication style of the leader and administrator was another factor that affected match between orientation towards the cooperative behavior of local residents and leadership style. If the leader's communication style matches with the local residents' expectations, the local residents will have higher communication satisfaction with the leader. The local residents' expectations mean the expectations of residents regarding leadership decision-making styles. The residents' expected leadership decision-making styles to be associated with their orientation towards cooperative behavior. If we consider the local residents in Pluak Daeng, Rayong province, they have a "non-cooperative" orientation towards cooperative behavior. Because the local residents of Plouk Daeng are in an industrialized area, they have more selfish characteristics than the individuals in the other two provinces, Koh Kha, Lampang and Kanchanaburi. They prefer to deal with others with standards and regulations. Nevertheless, the local residents there want to provide some suggestions to the IM Network Center as well because they prefer to deal reasonably with others. If they are allowed to participate in providing ideas to the IM Network Center, they

will feel comfortable with the Infrastructure Management PCP. Unfortunately, the leadership style of the IM Network Center chairman was pure “free reign,” which did not match with his local residents’ orientation towards cooperative behavior. Neither the participation of chairman to the IM Network Center nor allowing local residents to share their ideas with the IM Network Center was accomplished. This is another factor affecting the performance of the Infrastructural Management PCP.

From the above information, it can be seen that the match between leadership style and orientation towards cooperative behavior and number of parties/actors involved in the cooperative network affected the level of local residents’ participation. Specifically, if the leadership style and orientation towards cooperative behavior of local residents can be matched, there will be some encouragement generated among local residents, resulting in their preferring to participate in the project. On the other hand, if the leadership style and orientation towards cooperative behavior of local residents cannot be matched, there will be some conflict generated between the leadership and local residents, which will reduce the level of preference of local residents in participating the project. Moreover, the greater the number of parties/actors involved in the cooperative project, the more inflexibility the Network Center will generate, thus reducing the efficiency of the Network Center itself. With a greater variety of ideas, the Network Center committee needs more time to discuss the activities before they will be settled and released to the local residents. For this reason, the number of activities released by the Network Center that has higher number of parties/actors involved in the cooperative network seems to be less than that of the Network Center that has a lower number of parties/actors involved in the cooperative network. With a lower number of activities released from the Network Center, it automatically results in a lower level of local residents’ participation in the PCP when compared with the Network Center, which can release a higher number of activities.

To sum up, under the legal environment, i.e., firstly, unsupportive law and regulation for self initiated cooperative, secondly, limitation of budget utilization in all cooperative activities, and specific type of cooperative assignment assigned by DOLA, there are patterns of interaction among 6 factors affecting the performance of Pilot Cooperated Projects assignments assigned by DOLA. Matching between type of

cooperative assignment assigned by DOLA and common needs among local residents results to the attitude of local residents towards the cooperative network. If type of cooperative assignment assigned by DOLA match with common needs of local residents, the “positive” attitude among local residents towards the cooperative network will be created. In another hand, un-match between type of cooperative assignment assigned by DOLA and common needs among local residents can create “negative” attitude among local residents toward the cooperative network. The “positive” attitude among local residents towards the cooperative network with the proper number of parties/actors involved in cooperative network and matching between leadership style and orientation towards cooperative behavior brings local residents to give participation to the cooperative network. The proper number of parties/actors involved in the cooperative network in this dissertation finding is about four. For example, four parties/actors involved in Garbage Management PCP and in Disaster Prevention and Mitigation PCP create high flexibility level to the Network Center. High flexibility of Network Center results the activities, which were created by Network Center, can be done thoroughly. In the other hand, 8 parties/actors in Infrastructure Management cooperative network in Plouk Daeng district, Rayong retards the flexibility of Network Center, which results less number of Infrastructure Management activities were created by IM Network Center. Moreover, the “democratic” leadership style match to the “cooperative” orientation towards the cooperative behavior of local residents is found in this dissertation. With proper number of parties/actors involved in the cooperative network and matching of “democratic” style of leadership to “cooperative” orientation towards the cooperative behavior of local residents, the “positive” attitude among local residents towards the cooperative network can be developed to be high level of local residents’ participation and finally, to be a good performance of Pilot Cooperated Project.

CHAPTER 5

CONTRIBUTIONS

Throughout the period of studying the factors affecting the performance of the Pilot Cooperated Project, which was implemented through the cooperation among three agencies, the Department of Local Administration (DOLA) under the Ministry of Interior, the Japan International Cooperation Agency (JICA), and the Faculty of Political Science of Thammasat University, three parts were found to contribute theoretical implications, methodology implications, policy recommendations based on findings. Each part will be concluded as following paragraph.

5.1 Theoretical Implications

1) The cooperation among organizations needs to come from their original requirement as mentioned in “Resource-Dependence” theory. So type of cooperation should be proposed by them, which really reflects their need, not other parties’ need. If type of cooperation is proposed by local residents in the organization, they will give a fully participation to this cooperation because they know that this type of cooperation is the important tool to help them solving their local problem.

2) The organizations that cooperate with others under the social reason, i.e., they need others to accept them and they can survive in the social as the same, as mentioned in the “Institution” theory, they have tentative to give lower level of participation than that cooperate under common needs reason, “Resource-Dependence” theory.

5.2 Methodology Implications

1) In this dissertation, the basic information about 3 Pilot Cooperated Projects, Garbage Management in Koh Kha, Lampang, Disaster Prevention and Mitigation in Kanchanaburi, and Infrastructure Management in Plouk Daeng district, Rayong, which were gained from the progressive reports of DOLA were firstly studied together with interviewing the DOLA representatives before the committees of 3 PCP Network Center were interviewed. The representatives that researcher selected to interview can be increased in the future study to gain more information about PCP in different angles. For examples, local residents or officers of other LGOs that are not in Koh Kha area shall be additional interviewed in order to get their idea about Garbage Management PCP, for examples, if their area can join to the Garbage Management PCP, what they think? Do they want to join to this PCP?

2) The self initiative cooperated project that might belong to other countries should be studied in parallel to see the similarity and difference among them.

3) If, in the future study, legal environment, i.e., law and regulations for self initiated cooperative in Thailand, budget utilization in cooperative activities, is changed, the cooperation among LGOs in Thailand shall be studied under new legal environment and comparing outcomes of this study.

5.3 Policy Recommendations Based on Finding

From this study, match between type of cooperative assignment assigned by DOLA and common needs among local residents is the most important factor affecting the performance of PCP. Although, other factors, match between leadership style and orientation towards cooperative behavior, suit number of parties/actors involved in the cooperative network, is suitable for good performance of PCP but type of cooperation is not the project that local residents need, it is difficult to achieve good performance of PCP. So type of cooperated project should not come from “top down” assignment. It should come from self initiative cooperated project. This research finding is similar to “เทศบาลวิวัฒน์” concept, which belongs to Dr. Prawase suggestion in local government reform.

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APPENDICS

APPENDIX A

The General Information of Kanchanaburi Province

APPENDIX A

The General Information of Kanchanaburi Province

1. The General Kanchanaburi Area¹

1) Location and Territory

Kanchanaburi is located in the central region of Thailand. It's far from Bangkok to the west around 129 kilometers. Area of Kanchaburi has 19,483 km² and has the border close by Myanmar around 370 km. Its territories have the north close by Tak and Uthai thani, the south close by Ratchaburi, the east close by Suphan buri and the west close by Myanmar.

2) Administration District

This district is divided to 13 districts 95 Tambons 915 villages. Local administrative units have 124 units that consist of 1 Provincial Administrative Organization, 2 Town Municipality, 25 Tambon Municipality and 96 Tambon Administrative Organization. Population of Kanchanaburi has 800,519 people that divide to population in the municipality area 161,593 people and population in the Tambon administrative organization area 638,920 people.

Forest is the important natural resource of Kanchanaburi. It has the areas around 7 millionrais or 60% of all area. Tungyainaraesuan wife sanctuary is the most reputation and the most forest area in Thailand close by Tak, Uthai thani and Kanchanaburi. It has the forest area in Kanchaburi 1,470,000 rais. Including has a kind the natural resources of gemstone that's the black sapphire and the precious stone and original mine that's the dilomild, the marl and the industrial rock.

¹ The provincial office of Kanchanaburi, www.kanchanaburi.go.th, access to 11 March 2006

3) Economic Data

In the 2000 year, Gross provincial product (GPP) of Kanchanaburi is 44,380 million baht and 15 rank of the central region and 20 rank of the country. Income of population around 21,398 baht per people per year and the most first revenue of province depend on the industrial sector 22.49% equal value 9,958 million baht. A second rank depend on the commercial sector 20.78% equal value 9,224 million baht, the next rank is agricultural sector 14.84% equal value 6,589 million baht and other sector 41.95% equal value 18,608 million baht. Including, the revenue of the tourist and service sectors are 6,478.48 million baht and the tourist of Kanchanaburi has around 4 million people per year.

Agricultural area of Kanchanaburi has 2,344,085 rais. Economic plants are the sugar-cane, the cassava, the rice and the animal corn. There are 1,256 units of industrial sectors. The investment fund in the industrial sector is 37,717,230,497.0 baht and has 23,217 workers.²

4) Society

The Kanchanaburi education system has both school and non-school systems. There have 530 units in the elementary education to the higher education. There have 525 temples, both church and mosque. The religion of most people is Buddhism. There have 260 governmental public healths. The cultural has the provincial culture center and the district and Tambon culture council. Folklore is Rum Tong and Rum Hei.

Due to “The technical Cooperation Project on Capacity Building of Local Authorities to Local Cooperation and Local Public Standard” is researched for the supporting of local cooperation in the local authorities for the public service, so The Department of Local Administration (DOLA) determined the zoning in Kanchanaburi and divided it into 34 groups. The Kanchanaburi that are zoned in KJ.03 is selected by research team. It consists of 3 Local Government Organizations (LGO) that are Kanchanaburi Town Municipality, Pak Prak Tambon Administrative Organization and Ko Samrong Tambon Administrative Organization. However, Executive of KJ.03

² [The data of 30 october 2002](#)

has agreement that if the best cooperation is wanted, the continuous local area and the same problem in the local have to think of. Executive of KJ.03 suggest another one pilot project site, which is Ta Makam Tambon Administrative Organization. So the Pilot Cooperated Project (PCP) of Kanchanaburi province has 4 LGOs, which cooperate in the activity of the Disaster Prevention and Mitigation.

The Disaster Prevention and Mitigation PCP in Mueang Kanchanaburi, Kanchanaburi province consists 4 LGOs: Kanchanaburi Town Municipality, Pak Praek Tambon Administration Organization (TAO), Ko Samrong Tambon Administrative Organization (TAO) and Tha Makam Tambon Administration Organization (TAO). All of 4 LGOs areas are about 157.21 square kilometers, with 27,784 households, 66,750 people. With total revenue of 4 LGOs for 240,999,496.93 baht in 2005 and 219,186,365.50 (estimated) baht in 2006 and total expenditure 68,648,212.49 baht in 2005 and 221,794,482 baht in 2006, it is separated for Disaster Prevention and Mitigation about 7,944,480 baht. Whereas the total personnel officers are about 1,235 persons.³

2. Kanchanaburi Town Municipality⁴

1) Location and Territory

Kanchanaburi Town Municipality has area of 9.16 km². The office is located at Rak Mueang Road, Ban Nue, Tambon Mueang, Kanchanaburi District, Kanchanaburi Province and its telephone number is (034) 511-502, 512-502. Kanchanaburi Town Municipality has the territory close by Ta Makam Tambon Mueang, Kanchanaburi District in the north, the south close by Ta Lol Tambon Ta, Mueang District, the east close by Pak Prak Tambon Mueang, Kanchanaburi District and the west close by the right riverside of Kwai Yai River and Mae Kong River.

³ data from the questionnaire of each local government organization

⁴ Section of Plan and Policy Analysis, Division of Technical Services and Planning, Kanchanaburi Town Municipality. "The Developing Plan in 3 Years of Kanchanaburi Town Municipality (2006-2008)"

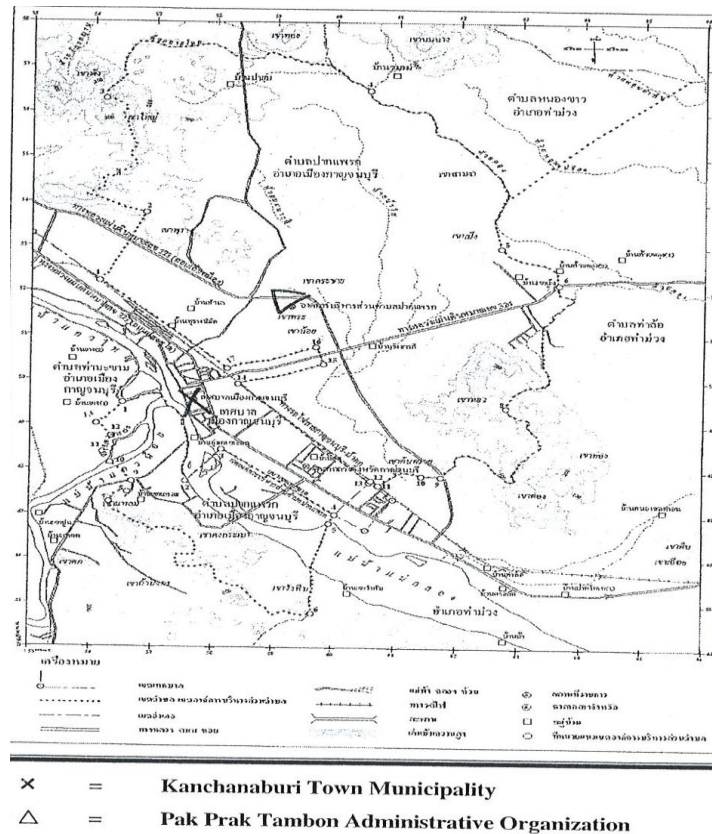


Figure A1 The Kanchanaburi Town Municipality Map

2) Administrative District

Kanchanaburi Town Municipality consists of 27 communities, those are

- (1) Toa Poon 1, 2 Community
- (2) Toa Poon 3 Community
- (3) Rom Pattana Community
- (4) Ta Num Chuk Don Community
- (5) Rong Hedp Ooi Community
- (6) Hua Sanambin Community
- (7) Chuk Kum Community
- (8) Pin Thong Community
- (9) Visud Rangsee Community
- (10) Pa Suk Market Center Community
- (11) Ban Neang Community
- (12) Ban Tai Community

- (13) Ban Boi Community
- (14) Don Rak Community
- (15) Soi Rong Nam Keang Community
- (16) Chuk Don Market Community
- (17) Ban Neang 2 Community
- (18) Ban Neang 3 Community
- (19) Chong Jareng Community
- (20) Prachapiban Community
- (21) Mae Nam Kwai Community
- (22) Moo Ban Sumpun Nivage Community
- (23) Don Rak Railway Station Community
- (24) Sang Chu To Neu Community
- (25) Visud Rangsee 2 Community
- (26) Ban Boi Community
- (27) Wang Yai Community

3) The Administrative Structure of Kanchanaburi Town Municipality

The administrative structure of Kanchanaburi Town Municipality consists of the legislation that's Municipal Council of Kanchanaburi Town Municipality that has 18 members of Municipal Council. This Municipal Council comes from the direct election people in the Municipality. And, the administrative department is Mayor that comes from direct election people in the Municipality. Mayor of Kanchanaburi Town Municipality has 2 Deputy Mayor and come from the appointment by himself. Including, in the next administrative line is Municipal Clerk level 9 that is the chief of office of the Municipal Clerk. In the committee of Municipal officer declare determined government division of Kanchanaburi Town Municipality that consist of 1 office, Office of the Municipal Clerk has responsibility in progress by the law, the custom and policy of the municipality and has duty in the part of Section of Clerical Work, Section of Civil Registration, Section of Personnel Administration, Section of Safety and Security, Section of Disaster Prevention and Mitigation, Section of Municipal Enterprises and Section of Executive Secretary, and 8 government division, which are 1. Division of Finance, 2. Division of Education, 3. Division of Public

Works, 4. Division of Public Health and Environment, 5.Division of Technical Service and Planning, 6. Division of Social Welfare, 7.Internal Audit Unit, and 8. Division of Sanitary Works.

The officer of Kanchanaburi Town Municipality divided into 2 types, which are the salary officer and volunteer officer.

The salary officer divided into 3 types

- (1) Municipal officer who is the same as government official 117 persons.
- (2) Mission's hire officer who is the contract officer for 4 years 77 persons.
- (3) General hire officer who is the year per year contract officer 54 persons.

While, the volunteer officer is Civil Defense Volunteer 110 persons.

4) The Developing Strategy of Kanchanaburi Town Municipality 2006-2008
Kanchanaburi Town Municipality determined 7 developing strategies.

Strategy 1: The Development of the public utility and the infrastructure

Approach 1: To construct and to maintenance road, bridge, drainage ditch and foot path.

Approach 2: To develop land for supporting the expansion of town in the town plan system.

Approach 3: To develop the traffic system.

Strategy 2: The Development of the resourceful and environmental administration

Approach 1: To set up conscience and realize in the resourceful and environmental administration.

Approach 2: To cure and restore the natural resource and environment.

Strategy 3: The Development and enhancement the economic system

Approach 1: To develop and support the occupation for the people.

Strategy 4: The Development the education, sport and local art and culture

Approach 1: To support and develop the education

Approach 2: To support sport.

Approach 3: To enhance and control the student behavior.

Approach 4: To support the tradition and culture.

Strategy 5: The Development the public health and life quality

Approach 1: To improve the public health service system.

Approach 2: To develop the life quality of people.

Strategy 6: The Development the politic and administration

Approach 1: To develop the human resource, equipment and office.

Approach 2: To support the participation of the people.

Approach 3: To improve the potential of Disaster Prevention and Mitigation management.

Strategy 7: The Development tourist

Approach 1: To improve the natural and history tourist place.

5) The Budget, property and officer of Kanchanaburi Town Municipality in the Disaster Prevention and Mitigation activity

The Kanchanaburi Town Municipality area is about 9.16 square kilometers. It consists of 13,598 households from 28 communities. With 31,383 people, most of them are in commercial sectors cause of most area are the town-community that is the center of commercial, residential and governmental office.

In Kanchanaburi Town Municipality zone, there are 17 educational places (from elementary to graduate school), 19 health care, 3 markets, 2 department stores, 128 factories, 47 hotels, 84 restaurants and 11 gas stations.

For Disaster Prevention and Mitigation activity, there are total personnel officer 1,141 persons: 41 fire men and 1,059 civil defense volunteers. There is total revenue 189,371,069.20 baht in 2005 and 160,028,500 (estimated) baht in 2006 while its total expenditure is 153,801,650.73 in 2005 and 160,022,680 in 2006. This revenue is set for Disaster Prevention and Mitigation budget about 7,344,480 baht. And it has Disaster Prevention and Mitigation equipments consist of 6 fire-engines car, a multi-purpose of Disaster Prevention and Mitigation lorry, 2 fire-engine boats, 4 water lorries, a water pump machine and 5 radio communication.

3. Pak Praek Tambon Administrative Organization⁵

1) Location and Territory

Pak Praek Tambon Administrative Organization has 47.8 km². The office is located at 10, 10 community local road Pak Praek, Tambon Mueang, Kanchanaburi District, Kanchanaburi Province and its telephone number is (034) 511-331-2. Pak Praek Tambon Administrative Organization is far from Mueang Kanchanaburi District around 3 km. and has the territory close by Ta Makam Tambon Mueang Kanchanaburi District in the north, the south close by Nhong Kow Tambon, Ta Lol Tambon Ta Meaug District, the east close by Nhong Kow Tambon Ta Meaug District and the west close by Ko Samrong Tambon Mueang Kanchanaburi District.

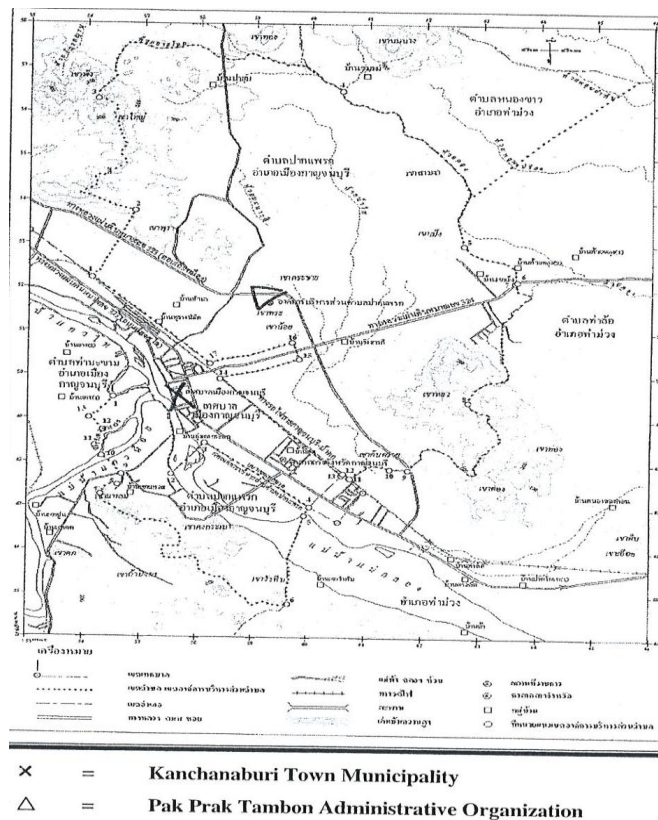


Figure A2 The Pak Praek Tambon Administrative Organization Map

⁵ Pak Praek Tambon Administrative Organization, Mueang Kanchanaburi District, “The Developing Plan in 3 Years of Pak Praek Tambon Administrative Organization (2006-2008)”

2) Administrative District

Pak Praek Tambon Administrative Organization consist of 13 communities, those are 1. Moo 1 Ban Lin Chang, 2. Moo 2 Ban Kao Laem, 3. Moo 3 Ban Tong Na, 4. Moo 4 Ban Wang Sarapee, 5. Moo 5 Ban Huo Na Bon, 6. Moo 6 Ban Pa Yub, 7. Moo 7 Ban Kao Meng, 8. Moo 8 Ban Huay Nam Sai, 9. Moo 9 Ban Kao Tong, 10. Moo 10 Ban Huo Na Lang, 11. Moo 11 Ban Pru Rang Ka Nimit, 12. Moo 12 Ban Klum Dong Krabuo, and 13. Moo 13 Ban Kao Meng Pattana.

3) The Administrative Structure of Pak Praek Tambon Administrative Organization

The administrative structures of Pak Praek Tambon Administrative Organization consist of the legislation of Pak Praek Tambon Administrative Organization Council, which has 26 members who come from the direct election of 2 members per community and the administrative department, the TAO chief executive, who come from the direct election people in the TAO. Chief executive of Pak Praek TAO has 2 Deputy Chief Executives who come from the appointment by himself. And the next administrative line is Chief Administrator of TAO level 6, the Chief of office of TAO. Offices of the Chief Administrator of the Pak Praek Tambon Administrative Organization consist of 1 office, Office of the Chief Administrator of TAO has responsibilities in progress by the law, the custom and policy of TAO, the section of General Administration, section of Policy and Planning, section of Legal Affairs, section of Law Enforcement, section of Disaster Prevention and Mitigation, and section of Tourism Promotion, and 4 government divisions, 1. Division of Finance, 2. Division of Public Works, 3. Division of Public Health and Environment, and 4. Division of Education Religion and Culture.

The officers of Pak Praek Tambon Administrative Organization are divided into 2 types, the salary officer and volunteer officer.

The salary officer divides into 4 types

- (1) Municipal Officer who is the same as government official 15 persons.
- (2) Permanent employee 7 persons.
- (3) Mission's hire officer who is the contract officer for 4 years 10 persons.

(4) General hire officer who is the year per year contract officer 13 persons.

While, the volunteer officer is Civil Defense Volunteer 38 persons.

4) The Developing Strategy of Pak Praek Tambon Administrative Organization 2006-2008

Strategy 1: The Development the potential manpower and supporting life quality

Approach 1: To support the potential manpower (Education/Religion/Morality).

Approach 2: To support and develop the potential of life quality.

Strategy 2: The Development of the infrastructure and public utility

Approach 1: Water source/Water system

Approach 2: Communication and transportation

Approach 3: To maintain the waterway

Approach 4: The city plan

Approach 5: To control the market

Approach 6: The public utility

Strategy 3: The Development of the economic and tourist

Approach 1: To develop the economic

Approach 2: To develop the tourist for preserving

Strategy 4: The Development of the politic, administration, human resource efficiency to the good governance

Approach 1: To support the democracy and the participation of people

Approach 2: To support the integration local planning

Approach 3: To support the good governance

Approach 4: To develop the knowledge and the morality for the leadership officer, employee and local

Approach 5: To support the welfare for the executive, member of council and the officer

Approach 6: To develop the office and cure the community

Approach 7: To supply, repair and improve the office equipments

Approach 8: To support the knowledge and interest the TAO activities

Strategy 5: The Development the community and society and preventing the security

Approach 1: To prevent the safety and security of life and property

Approach 2: To prevent and mitigate the disaster

Strategy 6: The Development of the preserving and protecting natural resource and environment

Approach 1: To manage the environment and pollution

Approach 2: To preserve, restore and prevent the natural resource and forest

Approach 3: To preserve the public area

Strategy 7: The Development of the art, culture, tradition and local knowledge

Approach 1: To preserve, restore the tradition art of local

Approach 2: To support the local knowledge

Approach 3: To protect the ancient remains, antique, art object and museum

5) The Budget, property and officer of Pak Praek Tambon Administrative Organization in the Disaster Prevention and Mitigation activity

Pak Praek Tambon Administrative Organization area is about 47.8 square kilometers. Most of area is alternate between the plateau surrounded by high mountains and the plain on the river bank. With soil condition is hard soil, pebble-sand and the laterite, it's hardly to be used land for agricultural purpose. So, most of the people (21,549 people form 8,631 households) are in freelance sectors.

In Pak Praek TAO zone has 9 educational places (from elementary to graduate school), 2 hotels, 7 restaurants and 2 gas stations.

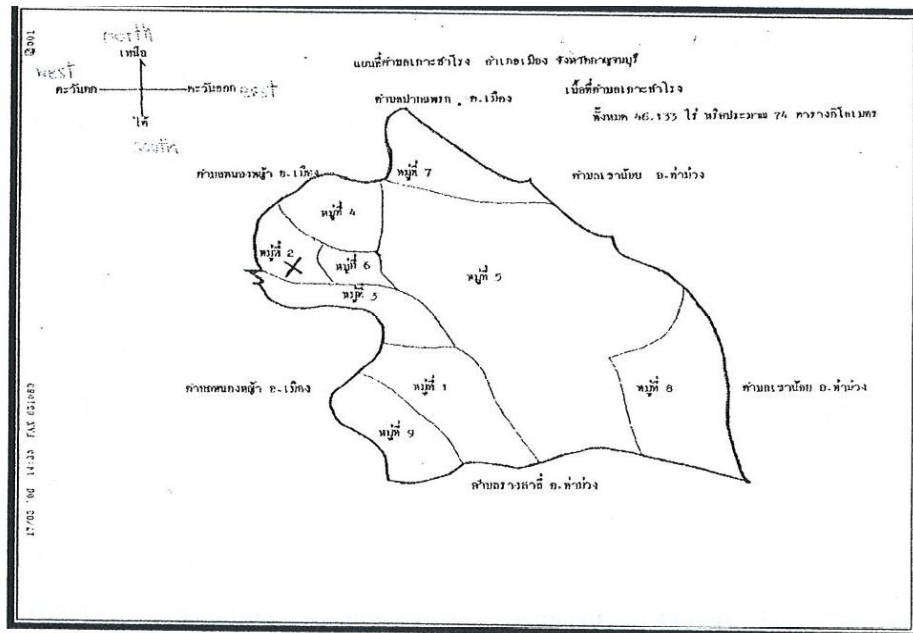
For Disaster Prevention and Mitigation activity, there are total personnel officer 33 persons: 1 fire men and 32 civil defense volunteers. There are total revenue

(estimated) 34,008,386 baht in 2006 while its total expenditure is 32,390,082 baht. This revenue is set for Disaster Prevention and Mitigation budget about 100,000 baht. For Disaster Prevention and Mitigation equipments, it has only 2 water lorries.

4. Ko Samrong Tambon Administrative Organization⁶

1) Location and Territory

Ko Samrong Tambon Administrative Organization has 74 km². The office is located at 204 Moo 2, Ko Samrong Tambon, Mueang Kanchanaburi District, Kanchanaburi Province and its telephone number is (034) 651-089. Ko Samrong Tambon Administrative Organization is far from Mueang Kanchanaburi District around 16 km. and has the territory close by Pak Prak Tambon Mueang Kanchanaburi District in the north, the south close by Kon Dol Tambon, Dan Makham Tia District, the east by Rang Saree Tambon Ta Meaug District and the west close by Nong Ya Tambon Mueang Kanchanaburi District.



x = Ko Samrong Tambon Administrative Organization

Figure A3 The Ko Samrong Tambon Administrative Organization Map

⁶ Ko Samrong Tambon Administrative Organization Mueang Kanchanaburi District, “The Developing Plan in 3 Years of Ko Samrong Tambon Administrative Organization (2006-2008)”

2) Administrative District

Ko Samrong Tambon Administrative Organization consist of 9 communities, 1. Ban Tha Kra Boe, 2. Ban Tha Oah, 3. Ban Keang Luang, 4. Ban Ko Samrong, 5. Ban Koa Tok, 6. Ban Chai Tung, 7. Ban Tum Mungkorn Tong, 8. Ban Kao Kwang, and 9. Ban Tha Lan Pattana.

3) The Administrative Structure of Ko Samrong Tambon Administrative Organization

The administrative structure of Ko Samrong Administrative Organization consist of the legislation of Ko Samrong Tambon Administrative Organization Council, which has 18 member of Tambon Administrative Organization Council. The members of Tambon Administrative Organization Council come from the direct election people of 2 members per community. And the administrative department is Chief Executive of TAO who comes from the direct election people in TAO. Chief executive of Ko Samrong Tambon Administrative Organization has 2 Deputy Chief Executive who come from the appointment by himself. Including, the next administrative line, Chief Administrator of TAO level 6, is Chief of the office of TAO. Offices of the Chief Administrator of Ko Samrong Tambon Administrative Organization consist of 1 office, Office of the Chief Administrator of the TAO has responsibility in progress by the law, the custom and policy of the TAO and has duty in the part of section of General Administration, section of policy and planning, section of legal affairs, section of law enforcement, section of Disaster Prevention and Mitigation, and section of Tourism Promotion. and 4 government divisions, 1. Division of Finance, 2. Division of public works, 3. Division of public health and environment, and 4. Division of education religion and culture.

The office of Ko Samrong Tambon Administrative Organization has the salary officer. The salary officer divides into 4 types, 1. Municipal officer, same as the government official, 4 peosons, 2. Permanent employee 5 persons, 3. Mission's hire officer, 4 years contract officer, 5 persons, and 4. General's hire officer, year per year hired officer, 4 persons.

4) The Developing Strategy of Ko Samrong Tambon Administrative Organization 2006-2008

Ko Samrong Tambon Administrative Organization determined 7 developing strategies and 27 approaches as follow:

Strategy 1: The Development of the supporting the life quality

Approach 1: To support the occupation

Approach 2: Social welfare

Approach 3: Relaxation activity

Approach 4: Education

Approach 5: Public health

Strategy 2: The Development of the planning and tourist

Approach 1: To plan.

Approach 2: The tourist

Strategy 3: The Development of the infrastructure

Approach 1: Communication and transport

Approach 2: To maintain waterway

Approach 3: Water source/local water system

Approach 4: To control the market

Approach 5: The city plan

Approach 6: Electricity

Approach 7: To construct the activity building of the village

Strategy 4: The Development of the management and the preservation of the natural resource and environment

Approach 1: To preserve the natural resource and to prevent the forest

Approach 2: To manage the environment and pollution

Approach 3: To keep the public area

Strategy 5: The Development of the art, culture, custom, tradition and local knowledge

Approach 1: To protect and preserve the ancient remains, antique, art object and national museum.

Approach 2: To prevent the good culture and local knowledge

Strategy 6: The Development of politic, administrative and manpower efficiency

Approach 1: To develop the knowledge for the local officer

Approach 2: To support the good governance system

Approach 3: To develop the office

Approach 4: To provide, repair and improve the equipment office

Approach 5: To provide, repair and improve the equipment in the village

Strategy 7: The Development of the order in the community/society and the safety and security

Approach 1: To support the democracy and fairness-freedom of the people and to support the participation of the people for developing the local

Approach 2: To prevent and mitigation the disaster

Approach 3: To keep the safety and security in the life and property

5) The Budget, property and officer of Ko Samrong Tambon Administrative Organization in the Disaster Prevention and Mitigation activity

Ko Samrong Tambon Administrative Organization is located in Ko Samrong tambon with area about 74 square kilometers. It is far from Mueang Kanchanaburi District around 16 kilometers. It comprises of 1,438 households from 9 villages with 5,444 people.

In Ko Samrong TAO zone has 7 educational places (from elementary to graduate school), 1 health care, 3 factories and 4 gas stations.

For Disaster Prevention and Mitigation activity, there are total personnel officer 41 persons: 6 fire men and 35 civil defense volunteers. There are total revenue 12,814,080.48 baht in 2005 and (estimated) 12,715,480 in 2006 while its total expenditure is about 5,989,641.76 baht in 2005 and 15,637,440 baht in 2006. This revenue is set for Disaster Prevention and Mitigation budget about 300,000 baht. For Disaster Prevention and Mitigation equipments, it has only 2 radio communications.

5. Ta Makam Tambon Administrative Organization⁷

1) Location and Territory

Ta Makam Tambon Administrative Organization has 26.25 km². The office is located at 9/9, Moo 3, Th Numtuen-Kaopoon Road, Ta Makam Tambon Mueang Kanchanaburi District, Kanchanaburi Province and its telephone number is (034) 653-372, 531-666, 531-444. Ta Makam Tambon Administrative Organization is far from Mueang Kanchanaburi District around 12 km. and has the territory close by Kang Sieng Tambon Mueang Kanchanaburi District in the north, the south close by Nong Ya Tambon, Mueang Kanchanaburi District, the east close by Kang Sieng Tambon Mueang Kanchanaburi and the west close by Pak Prak Tambon Mueang Kanchanaburi District.

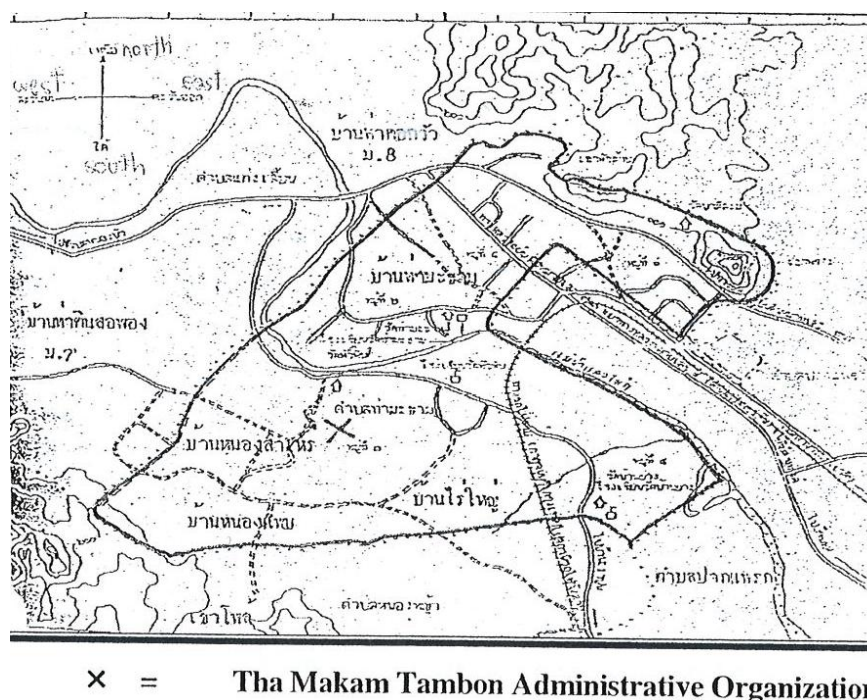


Figure A4 The Tha Makam Tambon Administrative Organization Map

⁷ Ta Makam Tambon Administrative Organization Mueang Kanchanaburi District, “The Developing Plan in 3 Years of Ta Makam Tambon Administrative Organization (2006-2008)”

2) Administrative District

Ta Makam Tambon Administrative Organization consists of 5 communities those are 1. Ban Kao Yai, 2. Ban Ta Makam, 3. Ban Hua Hin, 4. Ban Yang, and 5. Ban Hna Koa.

3) The Administrative Structure of Ta Makam Tambon Administrative Organization

The administrative structure of Ta Makam Administrative Organization consists of the legislation of Ta Makam Administrative Organization Council, which has 10 members of Tambon Administrative Organization Council. The member of Tambon Administrative Organization comes from direct election people of 2 members per community. And the administrative department is Chief Executive of TAO who comes from the direct election people in TAO. Chief executive of Ta Makam Tambon Administrative Organization has 2 Deputy Chief Executives who come from the appointment by himself. Including, the next administrative line, Chief Administrator of TAO level 6, is Chief of the office of TAO. Offices of the Chief Administrator of the Ta Makam Tambon Administrative Organization consist of 1 office, Office of the Chief Administrator of the TAO has responsibility in progress by the law, the custom and policy of the TAO and has duty in the part of section of general administration, section of policy and planning, section of legal affairs, section of law enforcement, section of Disaster Prevention and Mitigation, and section of tourism promotion, and 2 government divisions, 1. Division of Finance, and 2. Division of Public Works.

The officer of Ta Makam Tambon Administrative Organization has the salary officer. The salary officer divides to 3 parts, 1. twenty five officers from the TAO Chief Administrator, 2. four officers from Division of Finance, and 3. five officers from Division of Public Works.

4) The Developing Strategy of Ta Makam Tambon Administrative Organization 2006-2008

Ta Makam Tambon Administrative Organization determined 5 developing strategies and 14 approaches as follow:

Strategy 1: The Development of the infrastructure

Approach 1: To construct the communication route

Approach 2: To construct the drainage ditch

Approach 3: To expand the water system

Approach 4: To install the electricity public

Approach 5: To develop the traffic

Strategy 2: The Development of the water source

Approach 1: To improve and dick the canal and public water way.

Strategy 3: The Development of the economic

Approach 1: To support the group of occupation

Approach 2: To support the productivity transformation

Strategy 4: The Development of the public health

Approach 1: To solve the problem of the infections disease and pollution.

Strategy 5: The Development of the society

Approach 1: To support the sport and relaxation

Approach 2: To support and develop the education

Approach 3: To develop the life quality of the elderly and handicapped

Approach 4: To serve and help the disaster victim

Approach 5: To develop the communication

5) The Budget, property and officer of Ta Makam Tambon Administrative Organization the Disaster Prevention and Mitigation activity

Ta Makam Administrative Organization is located in Ta Makam Tambon with area about 26.25 square kilometers. It is far from Mueang Kanchanaburi District around 12 kilometers. It comprises of 4,117 households from 5 villages with 8,374 people. Most of area is used for agricultural purpose especially for farm and rice field.

In Ta Makam TAO zone has 7 educational places (from elementary to graduate school), 2 health care, 2 department stores, 11 hotels, 23 restaurants and 4 gas stations.

For Disaster Prevention and Mitigation activity, there are total personnel officer 26 person: 6 fire men and 20 civil defense volunteers. There are total revenue 12,322,572.10 baht in 2005 and (estimated) 12,434,000 in 2006 while its total

expenditure is about 14,740,922.97 baht in 2005 and 13,744,280 baht in 2006. This revenue is set for Disaster Prevention and Mitigation budget about 200,000 baht.

For Disaster Prevention and Mitigation equipments, it has only a multi-purpose of Disaster Prevention and Mitigation lorry and one water lorry.

The potentiality of 4 LGOs in Disaster Prevention and Mitigation management and their basic information can be summarized in below table.

Table A1 The Summary of Basic Information and Potentiality of Four LGOs in Disaster Prevention and Mitigation Management.

Information/Potential	Kanchanaburi Town Municipality	Pak Praek TAO	Ko Samrong TAO	Ta Makam TAO
Area, square km.	9.16	47.8	74	26.25
No. of households	13,598	8,631	1,438	4,117
Education places	17	9	7	7
Health care	19	-	1	2
Markets	3	-	-	-
Department Stores	2	-	-	2
Factories	128	-	3	-
Hotels	47	2	-	11
Restaurants	84	7	-	23
Gas stations	11	2	4	4
Personnel officer	1,141	33	41	26
Fire men	41	1	6	6
Civil defense volunteers	1,059	32	35	20
Disaster Prevention and Mitigation budget	7,344,480	100,000	300,000	200,000
Fire-engines car	6	-	-	-
Multi-purpose lorries	1	-	-	1
Fire-engine boats	2	-	-	-
Water lorries	4	2	-	1
Water pump machine	1	-	-	-
Radio communication	5	-	2	-

APPENDIX B

The Disaster Prevention and Mitigation Pilot Cooperated Project

APPENDIX B

The Disaster Prevention and Mitigation Pilot Cooperated Project

1. The Disaster Prevention and Mitigation Network Center of Kanchanaburi Town Municipality-Pak Praek TAO-Ko Samrong TAO- Ta Makam TAO

The cooperation among Kanchanaburi Town Municipality, Pak Praek TAO, Ko Samrong TAO and Ta Makahm TAO (referred as “the Disaster Prevention and Mitigation (DPM) Network Center” hereafter in this dissertation) has been carried out for quite long time before “the Project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation” starts, for instance, Garbage Management, Slaughterhouse Management, Disaster Prevention and Mitigation and Waste Water Disposal Management., Mr. Yutthana Watthanasuth, the chief administrator of Ta Makam TAO, Kanchanaburi. The reasons why those 4 LGOs are selected to joint with the project is that their areas are connected to each others. Moreover, their areas conditions and problems in locality are somewhat similar. By these reasons, the cooperation among Kanchanaburi pilot sites can arise effortlessly.

Such cooperation was born in a form of fraternity. For Disaster Prevention and Mitigation PCP, Kanchanaburi Town Municipality is the eldest brother who provides helps such as fire engines and firefighters to the rest because of its steadiest financial status, personnel availability and largest number of modern instruments. The others which are the younger brothers will give their aid in return in the form of payment. Nevertheless, the previous cooperation among 4 LGOs is unofficial and not be supported by law and regulation, so that the performance under the previous cooperation lacks clearness and is likely to violate local legislations because they are implemented outside the responsible areas of each LGO. Hence, the official local cooperation seems necessary for the Disaster Prevention and Mitigation PCP in order

to get advantage of LGOs, particularly, the small LGOs, Pak Praek TAO, Ko Samrong TAO and Ta Makahm TAO. The small LGOs who have not enough budgets, instruments and personnel for performing Disaster Prevention and Mitigation will receive the resources distribution for advantages of local residents. The reason of Kanchanaburi Town Municipality to cooperate with other 3 LGOs is because of the DOLA requirement. It is not necessary, in reality, for Kanchanaburi Town Municipality to officially cooperate with other LGOs, interviewing of Mayor of Kanchanaburi Town Municipal, because Kanchanaburi Town Municipality is the biggest size, enough facilities and resources, which ready for Disaster situations those might occur in their own Kanchanaburi Town area, while other 3 TAOs, i.e., Pak Praek, Ko Somrong, and Ta Makahm TAO, voluntarily joint with this program because they realize that there are a lot of additional benefits when their cooperation status is changed from informal to formal relation, the MOU among 4 LGOs is held. Moreover, their disaster problems can be managed more efficiency, interviewing of Mayor of 3 TAOs. Therefore, the Disaster Prevention and Mitigation PCP seems to not the common needs of all LGOs in Kanachanaburi province.

When “the Project on Capacity Building of Local Authorities through Local Public Standard and Local Cooperation” is performed in Kanchanaburi province, the organization structure and authorities of the DPM Network Center has been set. The organization structure of the DPM Network Center of Kanchanaburi Town Municipality-Pak Praek TAO-Ko Samrong TAO-Ta Makahm TAO consists 2 committees, i.e., 1) the committee that is the position officially appointed under the regulations of the DPM Network Center and 2) the sub-committee appointed by the DPM Network Center committee; this committee is responsible for preparing and collecting basic information to offer the committee. The sub-committee was also set in order to screen the agenda and assist the executive committee before bringing into the executive meeting. The location of DPM Network Center was set up in the Kanchanaburi Town Municipality office, the same place as the chairman of DPM Network Center works. There are 12 committees and 1 consultant of the DPM Network Center, 1. Mayor of Kanchanaburi Town Municipality: Chairman, 2. Chief executive of Pak Praek TAO: Vice chairman, 3. Chief executive of Ko Samrong TAO: Vice chairman, 4. Chief executive of Ta Makahm TAO: Vice chairman, 5.

Municipal clerk of Kanchanaburi Town Municipality: Committee and secretary, 6. Chief administrator of Pak Praek TAO: Committee and secretary, 7. Chief administrator of Ko Samrong TAO: Committee and assistant secretary, 8. Chief administrator of Ta Makahm TAO: Committee and assistant secretary, 9. Representative of civil society of Kanchanaburi Town Municipality: Committee, 10. Representative of civil society of Pak Praek TAO: Committee, 11. Representative of civil society of Ko Samrong TAO: Committee, 12. Representative of civil society of Ta Makahm TAO: Committee, and 13. Director of Kanchanaburi provincial office for local Consultant.

The DPM Network Center sub-committee consists of 4 sub-committees and 1 secretary, i.e., 1. Municipality clerk of Kanchanaburi Town Municipality was assigned as Chairman of the sub-committee, 2. Chief administrator of Pak Praek TAO was assigned as Sub-committee, 3. Chief administrator of Ko Samrong TAO was assigned as Sub-committee, 4. Chief administrator of Ta Makahm TAO was assigned as Sub-committee, 5. Chief of the office of municipal clerk of Kanchanaburi Town Municipality was assigned as Secretary.



Figure B1 Disaster Prevention and Mitigation PCP Agreement Signing

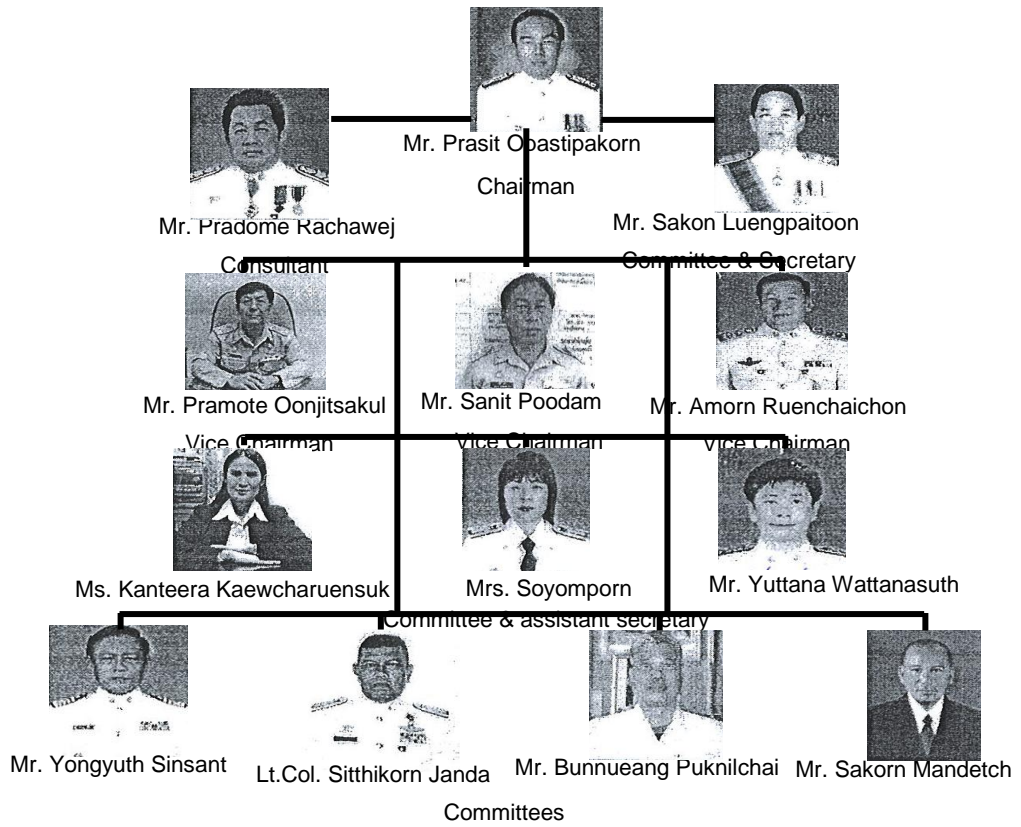


Figure B2 Disaster Prevention and Mitigation Network Center Committee

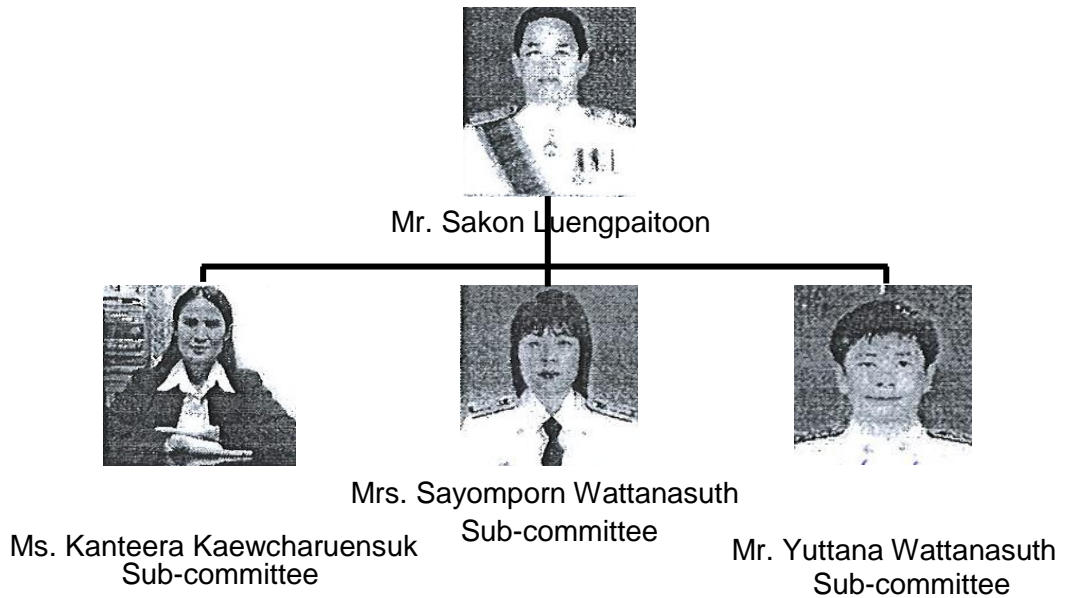


Figure B3 Disaster Prevention and Mitigation Network Center Sub-Committee

The main authorities of the DPM Network Center is cooperating among the parties/actors in performing Disaster Prevention and Mitigation activities, i.e. fire prevention and mitigation, flood prevention and mitigation, windstorm prevention and mitigation, drought prevention and mitigation etc. By following Fire Prevention and Protection Act B.E. 2542, the DPM Network Center has the authority in commanding personnel, officers and civil volunteer of Kanchanaburi Town Municipality, Pak Praek TAO, Ko Samrong TAO and Ta Makahm TAO.

Moreover, the DPM Network Center shall undertake and finish performances following the authorities and responsibilities in performing Disaster Prevention and Mitigation to reach the achievements, i.e., achievement of timing in providing the services and rapidity in providing the services, achievement of residents satisfaction, response towards the problems and problem solving in time for residents' want and consideration about the highest benefits to residents, and achievement of budget employment, it should be employed economically and worthily from the budgets distributed from each LGO that is the parties/actors.

For these achievements, the DPM Network Center shall perform to be more efficient than each LGO performs by itself. All achievements have an effect on the assessment of performance that is under the power and authority of the DPM Network Center committee to set up key performance indicators, rules, conditions, and solutions for performances, including objectives of performing Disaster Prevention and Mitigation.

Besides, under the regulations of the DPM Network Center, the authorities of the DPM Network Center committee are briefly indicated as follows:

- 1) Cooperating to establish regulations of administration to allow the center having the concrete regulations supporting its performances, i.e., indicating the location of center (both main and branch centers), managing administrative structure and appointing period of position of the committee, making performance plan, performing budget management, performing access management, saving and investigating money, recording accounts, performing conferences and decision making and editing and canceling the regulations of the center;

- 2) Cooperating to make performance plan of the center to be related to each member's performance plan making;

3) Cooperating to perform budget management of the center, including to investigate budget payment;

4) Cooperating to make account system of the center, to make public relations and to report about the center's advance to people in locality, for example, making manual for fire prevention and mitigation and establishing hotline for Disaster Prevention and Mitigation, including to promote people or other associate agencies to build the cooperation network for public service management.

In conclusion, there are 2 points of performances of the DPM Network Center, which are performances following the resolution of the conference aiming for the concrete results and performances needed to be done for enhancing the capability of the DPM Network Center.

1st point: Performances following the resolution of the conference aiming for the concrete results

- 1) Signing in the regulations of the center B.E. 2549;
- 2) Making the plan of Disaster Prevention and Mitigation for the center B.E. 2550;
- 3) Making the training plan for personnel for Disaster Prevention and Mitigation;
- 4) Making the table for the calculation of capital per unit;
- 5) Making the manual for fire prevention and mitigation and drought prevention and mitigation for giving to people.

2nd point: Performances needed to be done for enhancing the capability of the DPM Network Center

1) Purchasing 9-storey crane and another set of instruments for Disaster Prevention and Mitigation. The reason for that is that, nowadays, there are more 9-storey and 10-storey hotels and hospitals in the areas of the DPM Network Center, but the LGOs which are the parties/actors of the DPM Network Center have only 7-storey crane and they also have not enough instruments for Disaster Prevention and Mitigation;

2) Establishing the office of the DPM Network Center and the branch fire station in the map of the DPM Network Center.

All above authorities and responsibilities of DPM Network Center are automatically considered as the evaluating criterion of the project.

The local cooperation DPM Network Center of Mueang Kanchanaburi Town Municipality – Pak Praek Tambon Municipality – Ta Makham TAO – Ko Samrong TAO in Mueang Kanchanaburi consists of 4 parties/actors, Kanchanaburi Town Municipality, Pak Praek Tambon Municipality, Ta Makham TAO and Ko Samrong TAO. All 4 LGOs are not zoned in the same zoning area. Specifically, Kanchanaburi Town Municipality, Pak Praek TAO and Ko Samrong TAO are in the same zone while Ta Makham TAO is in another zone. The office of DPM Network Center situate in the office of Kanchanaburi Town Municipality. The mayor of Kanchanaburi Town Municipality is the DPM Network Center chairman. The main duty of the DPM Network Center is to prevent and mitigate disaster, such as fire, flood, windstorm, drought and any other possible disasters, through local cooperation. The size of all service areas under the responsibility is 157.5 km² in total. The total number of residents who receive service is 67,956 persons or 27,371 households as demonstrated in the following table.

Table B1 Geographic Information of Four Parties/Actors of Disaster Prevention and Mitigation PCP.

LGOs parties/actors	Area Zoning	Size of the local government/ Service Area (km2)	Number of Household (household)	Revenue for the project	Population (person)
Kanchanaburi Town Municipality	KJ.03	9.16	13,515	7,344,480	31,495
Pak Praek Tambon Municipality	KJ.03	47.8	8,091	100,000	21,268
Ta Makham TAO	KJ. 04	26.25	3,774	200,000	7,951
Ko Samrong TAO	KJ.03	74	2,001	300,000	7,242
Total	-	157.5	27,371	7,944,480	67,956

From above table, you will see that Ta Makham TAO does not stay in the same zone as other 3 LGOs, Kanchanaburi Town Municipality, Pak Praek Tambon Municipality, and Ko Samrong TAO. But Ta Makham TAO was invited to joint in the Disaster Prevention and Mitigation PCP because Ta Makam TAO is close to Kanchanaburi Town Municipality and they face the same problems, especially the problem in town area such traffic system. Zoning the LGO by geographical basis instead of the common need basis, the regulation of PCP suggested by the DOLA, causes the inefficiency in local cooperation building. Actually there are other neighboring LGOs that have the same needs and problems, but they cannot join the activities of the project since they are grouped in other zones.

In term of size and capacity of LGOs in the Disaster Prevention and Mitigation PCP, it is a cooperation between LGOs with the size and capability greater than other LGOs not the ones with the same size and capability. The role of the LGO that has highest capability directly affects the progresses of the DPM Network Center's performances. Such local cooperation building makes the local cooperation is in the form of some parties/actors having capability with low capability necessary to rely on others with highest capability, particularly in case of performing fire prevention and protection. No matter that fire occurs in the areas under the responsibility of any LGO, it is necessary to mainly employ fire engines of Kanchanaburi Town Municipality, for it is only LGO that has fire engine whereas other ones has only water-carrying truck. Thus, the DPM Network Center's performances rely on the highest capability LGO or Kanchanaburi Town Municipality in this case.

The need for the establishment of the local cooperation DPM Network Center of the parties/actors can be seen through its limitation of capacity for this duty. The only ready and competent LGO for this duty is Kanchanaburi Town Municipality, which has the different reason to join the project; it owns 5 fire engines, 4 water trucks, 1 rescue car, 2 fire boats, 1 inspection pickup and 42 regular officers in charge of Disaster Prevention and Mitigation. Pak Praek Tambon Municipality owns 2 water trucks, 1 pick and 5 officers in charge of Disaster Prevention and Mitigation. Ko Samrong TAO owns 1 pickup and 4 officers in charge of Disaster Prevention and

Mitigation. And Ta Makham TAO owns 1 water truck, 1 pickup and 4 officers in charge of Disaster Prevention and Mitigation as demonstrated in the following table.

Table B2 The Disaster Prevention and Mitigation Capacity of Four Parties/Actors

Member LGOs	Kanchanaburi Town Municipality	Pak Praek Tambon Municipality	Ta Makham TAO	Ko Samrong TAO
Fire engine (s)	5	-	-	-
Water truck (s)	4	2	1	-
Rescue car (s)	1	-	-	-
Fire boat (s)	2	-	-	-
Pickup (s)	1	1	1	1
Personnel (persons)	42	5	4	2

Consequently, performing Disaster Prevention and Mitigation through local cooperation in the form of the local cooperation DPM Network Center can increase capacity and efficiency for Disaster Prevention and Mitigation of the parties/actors. That is because there is integration of resource and personnel for performing the duty under the name of the DPM Network Center. The large and competent LGOs can give assistance to the small ones. This is beneficial to capacity building for public service management in the localities. For this reason, the residents in each locality can receive quality and efficient public service from the LGOs. The DPM Network Center obtains annual supporting budget from the parties/actors in the rate that is agreeable among every parties/actors: 200,000 baht from Kanchanaburi Town Municipality, 100,000 baht from Pak Praek Tambon Municipality, 100,000 baht from Ko Samrong TAO and 100,000 baht from Ta Makham TAO as demonstrated in the following table.

Table B3 Annual Supporting Budgets to DPM Network Center from Four Parties/Actors

Member LGOs	FY2007 (Baht)	FY2008 (Baht)
Kanchanaburi Town Municipality	200,000	200,000
Pak Praek Tambon Municipality	100,000	100,000
Ta Makham TAO	100,000	100,000
Ko Samrong TAO	100,000	100,000
Total	500,000	500,000

In terms of worthiness, integration of resource and personnel, which is implemented under the name of the DPM Network Center, makes the small LGOs saving a lot of budget for the investment on acquirement of durable articles for Disaster Prevention and Mitigation. If each party/actor must purchase a fire engine that has a 4,000 liter water container by itself, it must spend 4,650,000 baht to purchase it. In case of purchasing a 10,000 liter water truck, it must pay 5,750,000 baht. For the wages of personnel – 6 regular officers for the fire engine and 2 regular officers for the water truck, it must spend 61,600 baht per a month. Besides, the fire engine and water truck must use fuel about 20 liters per an hour. Therefore, the LGO must pay fuel cost 1,320 baht per an hour. The LGO also spends the maintenance cost for the equipments and instruments approximately 10,360 baht. In conclusion, if the LGO performs every activity related to fire prevention by itself, it must pay totally 10,473,280 baht for all costs. These costs are demonstrated in the below table.

Table B4 Expenses of Activity Related to Fire Suppression Comparing between LGO Performed by Itself and Performed under DPM Network Center.

Item of Expenses of Activity Related to Fire Suppression	In case of each LGO performs by itself	In case of the LGOs perform in the name of DPM Network Center
Purchase of 1 fire engine (4,000 liters)	4,650,000	-
Purchase of 1 water truck (10,000 liters)	5,750,000	-
Wages of personnel per a month (6 regular officers for the fire engine, 2 regular officers for the water truck)	61,600	61,600
Fuel cost (1 fire engine and 1 water truck use 20 liters of fuel per an hour)	1,320	1,320
Maintenance cost for equipments and instruments	10,360	10,360
Total (Baht)	10,473,280	73,280

Note: Saving the Budget for (10,473,280 – 73,280) 10,400,000 baht

It can be seen that integration of resource and personnel, which is implemented under that name of the DPM Network Center, for fire suppression can make the parties/actors saving the expenses of purchasing fire engine and water truck. The remaining expenses are only fuel cost, wages of personnel and maintenance cost for equipments and instruments. In other words, each party/actor spends only 73,280 baht if allowing the DPM Network Center performing fire suppression. It means that performing fire suppression through local cooperation can save the expenses for 10,400,000 baht.

The outcomes of the performance of the DPM Network Center since it was establishment until the end of the second fiscal year (September 2008) can be seen through 3 activities: systematization and performance planning, arrangement of training and lecture for the personnel in charge of Disaster Prevention and Mitigation and the residents in the localities and fire suppression in the localities.

The monthly meeting of the DPM Network Center administrative committee is an opportunity for exchanging information about problem condition and capacity for dealing with disaster of each party/actor. Such meeting is also an occasion for making a integrated plan for performing Disaster Prevention and Mitigation through local cooperation, for instance, a plan for mapping water sources and water station for fire engine in each locality and a plan for specifying escape ways and shelter in case flood occurs in the localities. Furthermore, there is also the enactment of rules concerning the activities of the center such as the Rule of Providing Disaster Prevention and Mitigation B.E. 2550, the Rule on Management of Grant of the Local Cooperation DPM Network Center B.E. 2550 and the Rule on the Performances in the situation of Fire B.E. 2550. In addition, there is making of public relations brochure for introducing the performances of the DPM Network Center. Such brochure will be given to the people, so that they can contact the DPM Network Center directly in case any disaster happens.

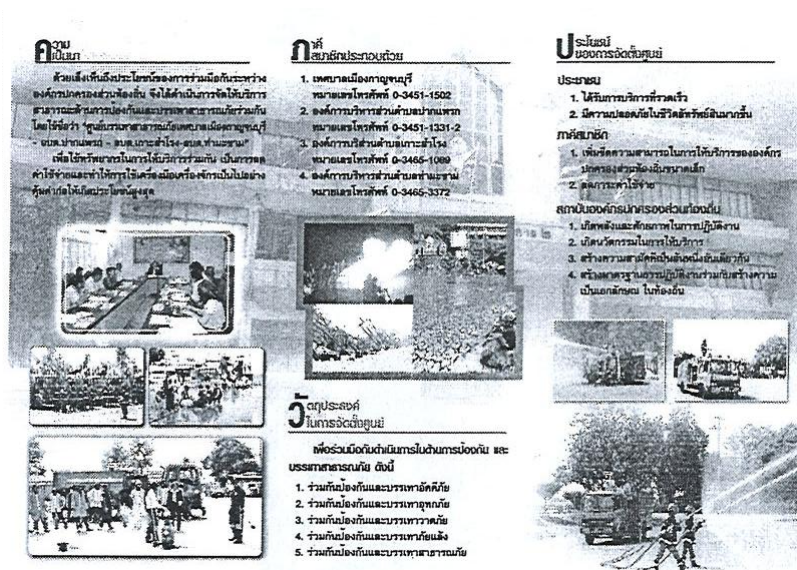


Figure B4 Disaster Prevention and Mitigation Network Center Brochure

ข้อมูลพื้นฐาน

เทศบาลเมืองกาญจนบุรี	9.16 ตร.กม.
อบต.ปากแพรก	47.80 ตร.กม.
อบต.เกาะคำโรง	74.00 ตร.กม.
อบต.ท่ามะขาม	26.25 ตร.กม.
รวม	157.21 ตร.กม.



ที่ตั้ง

หอบริเวณเขตเพลิงไหม้ในพื้นที่เทศบาลเมืองกาญจนบุรี
- อย.ปากแพรก - อย.เกาะคำโรง - อย.ท่ามะขาม
สามารถแจ้งเหตุเพลิงไหม้กับหน่วยอาสาสมัคร 199

สถานที่ตั้ง

อาคารงานป้องกันและบรรเทาสาธารณภัย
เทศบาลเมืองกาญจนบุรี เลขที่ 34 ถนนหลักเมือง
ตำบลบ้านเหนือ อำเภอเมือง จังหวัดกาญจนบุรี
โทรศัพท์ 0-3451-2459, 0-3451-1000

แผนที่สังเขป



ศูนย์บรรเทาสาธารณภัย

เทศบาลเมืองกาญจนบุรี - อย.ปากแพรก - อย.เกาะคำโรง - อย.ท่ามะขาม



หมายเลขโทรศัพท์แจ้งเหตุเพลิงไหม้ 199

Figure B5 Disaster Prevention and Mitigation Network Center Information



Figure B6 Disaster Prevention and Mitigation Network Center Monthly Meeting

Another important outcome of the performances of the DPM Network Center is arrangement of training for firefighters, civil defense volunteers and community leader of the community. The training aims to enhance their knowledge, skill and ability of Disaster Prevention and Mitigation. Moreover, the training attempts to enable the trainees helping both themselves and other persons when any disaster happens. There were 2 trainings arranged during the past period. The first one was the training for the personnel in charge of Disaster Prevention and Mitigation, firefighters and civil defense volunteers: this training was arranged on 14-16 January 2008 at Kanchanaburi Town Municipality. The second one was the training for building capacity for Disaster Prevention and Mitigation of the communities in the areas of 4 pilot sites; this training was arranged on 23 January 2008.

In these trainings, the DPM Network Center invited the lecturers who were expert in Disaster Prevention and Mitigation to give knowledge to the trainees. They demonstrate the use of equipments and instruments such as fire suit and breathing apparatus. There was the use simulated situation of fire suppression to demonstrate the preparation for the real situation. The lecturers also explained about the techniques of fire suppression. The total budget spent in arranging the training is 109,100 baht.



Figure B7 Disaster Prevention and Mitigation Training for Kanchanaburi Residents



Figure B8 Kanchanaburi Local Residents who Attended the Disaster Prevention and Mitigation Training

Throughout the past period, 18 times of fire suppression had been performed through the cooperation among the DPM Network Center and the parties/actors, i.e., 8 times in Kanchanaburi Town Municipality, 7 times in Pak Praek Tambon Municipality, 1 time in Ko Samrong TAO and 2 times in Ta Makham TAO. These are considered as the outcome of performing Disaster Prevention and Mitigation through local cooperation. This outcome clearly indicates that fire suppression performed through local cooperation is more efficient and rapid than fire suppression performed alone by the only LGO. Additionally, by performing fire suppression through local cooperation, it is possible to control and restrict the destruction from fire in the localities.



Figure B9 Fire Fighting on Site by Disaster Prevention and Mitigation Network Center Officers in Charge



Figure B10 Another Picture of Fire Fighting on Site by Disaster Prevention and Mitigation Network Center Officers in Charge

APPENDIX C

The General Information of Plouk Daeng District, Rayong Province

APPENDIX C

The General Information of Plouk Daeng District, Rayong Province

1. The General Rayong Area

1) Location and Territory

Rayong province has total area about 3,552 kilometer squares. It is in eastern in Thailand, located on latitude 12-13 and 101-102 longitudes or about 179 kilometers from Bangkok. It share border with Nongyai, Bhothong and Srirasha district of Chonburi province in the north, with Nayaiarm and Kangkhangmaew district of Chanthaburi province in the east, with Sattaheep and Banglamung district of Chonburi in the west, and bordering with a sea of Thai Bay 100 kilometers.

2) Geography

Most land of Rayong is plain area sloping down along seashore and flat area among the mountains. There are 2 ranges of mountains. Rayong area has 2 main rivers, one is Rayong river, that is 50 kilometers in length, across the area of Ploukdang, Baankai and Muang Rayong district and pass toward the mouth of river through the sea in Tambon Paknam of Muang Rayong district, another is Prasae river, that is 25 kilometer in length, across the area of Kaochamao sub-district of Klang district and pass toward the mouth of river through the sea in Tambon Paknamprasae of Klang district.

3) Weather

The weather of Rayong area is tropical monsoon that has sea breeze blowing the whole year. Almost area is worm while the seashore land is cool. The average temperature throughout the year is 29.5 degrees centigrade; highest temperature up at

38.7 degrees centigrade in April, lowest temperature down at 17.8 degrees centigrade in January. There is plentiful rain in rainy season that is between May and October.

4) Administration District

Rayong government area consists of 6 districts, Muangrayong, Muangklang, Baankai, Pluakdang, Baanshang, and Wangchan and 2 sub-districts, Kaochamao, and Nikompattana.

5) Economic

Data from office of the National Economic and Social Development Board indicate that Rayong has good economy, in 2003 the provincial gross productivity value 276,261 million baht, it is result from productive value of industrial sector especially petroleum and petrochemical industries. Rayong also has the largest per capita productive value in the country, the average value are 523,222 baht/person/year. Economic growth rate of Rayong rise from 8.4% in 1999 up to 8.5% in 2000 due to the support to industrial investment. Industrial production is major sector in economic structure of Rayong that is 55.81% of Gross Provincial Productivity (GPP), secondary economic sector are mine and stone industries value 25.85%, electricity and water supply service value 6.33% and agriculture sector value 2.79%. The changing in economic structure in last decade indicates that agriculture sector had been decreasing continually.

6) Social and Culture

Most people of Rayong 98.88% are Buddhist and other religion including Islam and Christ. Because the most people are Buddhist, general local tradition of Rayong especially religious custom is not different from other province. However, there are local cultural identities that remain in present such as local language accent, traditional play and song.

2. Basic Information of Plouk Daeng District

1) Location and Territory

In the past, Ploukdaeng district area was one part of Baankai district. Then many people has settled and occupied this area. In 1970 Ploukdaeng area was set up to be sub-district and became to be district in 1979. Ploukdaeng district administration office located on Sukkhamiban 5 road, Tambon Ploukdaeng, it is far from Bangkok of 184 kilometers. Main street to Ploukdaeng district is public road number 2191. Total areas are 607 kilometer squares. General weather is humid. There are 4 Borders of Plouk Daeng district, in Northern: Plouk Daeng district adjoin to Nongyai district, Chonburi province, in Southern: Plouk Daeng district adjoin to Pattananikom sub-district, Rayong province, in Eastern: Plouk Daeng district adjoin to Baankai district, Rayong province, and in Western: Plouk Daeng district adjoin to Sriracha district, Baanbueng district, Chonburi province.

2) Administrative District

Plouk Daeng district government area consists of 6 Tambons. District government area covers 34 villages and 2 municipality areas. The LGOs of studying of local management cooperation in physical infrastructure services are 1. Tambon Jomphonjaopraya Municipality, 2. Tambon Baanploukdang Municipality, 3. Mabyangporn Tambon Administrative Organization, 4. Ploukdaeng Tambon administrative Organization, 5. Tasit Tambon Administrative Organization, 6. Maenamkhu Tambon Administrative Organization, 7. Lahan Tambon Administrative Organization, and 8. Nongrai Tambon Administrative Organization.

The cooperative network in Plouk Daeng district consists of 8 LGOs, Baan Plouk Daeng Tambon Municipality, Jomphonchopraya Tambon Municipality, Plouk Daeng Tambon Administrative Organization (TAO), Tasit Tambon Administrative Organization, Lahan Tambon Administrative Organization, Nongrai Tambon Administrative Organization, Maenamkhu Tambon Administrative Organization and Mabyangporn Tambon Administrative Organization. The majority of Plouk Daeng

district topography is an alternate plain of hill and mountain. There are one river and two agricultural reservoirs. Its climate is rainy during May until October. The main area is used for agricultural, growing certain crops, especially pineapple, rubber and manioc. The industrial factories are also scattering among the district⁹. Most of the needs for infrastructure activities are infrastructure construction and maintenance of infrastructure damaged from natural perils such as thunderbolt strike lamppost, rushing water from the hill and scarcity of water in some area. The details of each local government organization are as follow:

3. Plouk Daeng Tambon Administrative Organization

1) Location and Territory

Plouk Daeng TAO is located on Thamma-Prachakhom Road, 1st village, Plouk Daeng Tambon, Plouk Daeng district, Rayong province. Plouk Daeng Tambon Administrative Organization has land area of 71.22 kilometer squares, most of it are slope plain among the mountains. It shares its borders with Bhorwin Tambon, Sriracha district and Tasit Tambon, Ploukdang district in the north; Maenamkhu Tambon, Ploukdang district in the south; Mabyangporn Tambon, Plouk Daeng district in the west; Lahan Tambon and Tasit-sub district, Ploukdang district in the east. Plouk Daeng Tambon area includes 6 villages. There are 5 villages, 2nd -6th village, in the area service of Plouk Daeng Tambon Administrative Organization. And one village in the area service of Baanploukdaeng Tambon Municipality, that is the 1st village of Plouk Daeng Tambon.

⁹ Major industrial factories in Ploukdaeng district including Natural Motor Co., Limited., Eastern Sea Broad settlement, Kawasaki Motor (Thailand) Co., Limited. And JK Land Industrial area.

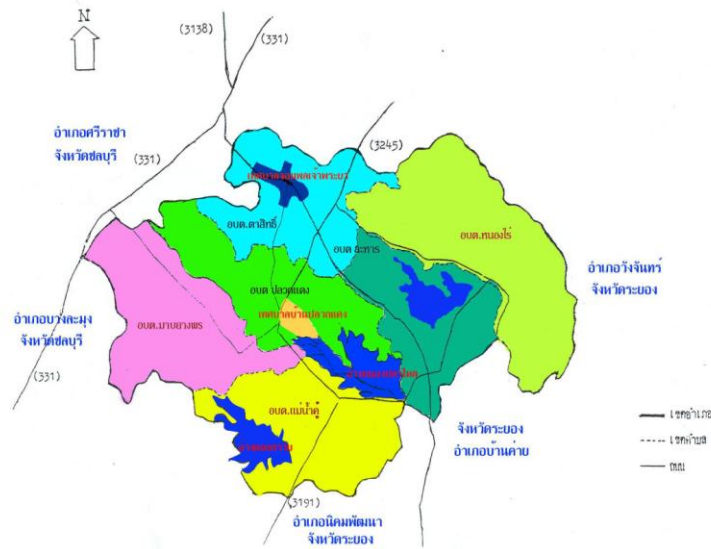


Figure C1 Plouk Daeng Tambon Administrative Organization Map

2) Administrative District

Plouk Daeng TAO consists of 6 communities, Baan Plouk daeng, Baan Cahkmalai, Baan Rawing, Baan Wangtaphin, Baan Wangkanyang, and Baan Thaptong.

3) The Administrative Structure of Plouk Daeng Tambon Administrative Organization

Personnel management system of Plouk Daeng Tambon Administrative Organization consists of 2 parts, 1. the legislative include Chairman of Tambon Administrative Organization council, Vice Chairman of Tambon Administrative Organization council, and member of Tambon Administrative Organization council. Their function is operating the legislative process according to all regulations and laws, 2. the executive include Chief Executive of SAO, the first and second Deputy Chief Executive of the SAO. Their function is performing all duties of SAO according to the vote of council and duties that provided in Tambon council and Tambon administrative organization act of B.E. 2537 (1994) and other related act. The

administrative structure consists of 7 divisions, Division of Chief Administrator of SAO, Division of Civil Works Technician, Division of Fiscal Office, Division of Public Health and Environment, Division of Education, Culture and Religion, Division of Social Welfare, and Division of Agriculture Promotion

4) The Developing Strategy of Plouk Daeng Tambon Administrative Organization 2006-2008

There are 5 developing strategies as follow

Strategy 1: Constructing, Improving and Maintenance transportation route among all village and tambons.

Strategy 2: Improving and Extending electricity service area and set up more lamp post

Strategy 3: Improving and Setting up telecommunication system in every villages

Strategy 4: Improving quality and quantity of water supply resource

Strategy 5: Improving infrastructure system for all over villages

5) The Financial Status of Plouk Daeng Tambon Administrative Organization of B.E. 2547

The budget of Plouk Daeng TAO is as follow:

Local Levied Taxes:	41,915,510.02	Baht
Taxes Levied by government:	14,019,363.65	Baht
General grants from national government:	2,205,444.00	Baht
Total:	58,140,317.67	Baht

The budget for IM Network Center in FY 2007 is 810,000 Baht, in FY 2008 is 1,135,707 Baht.

2) Administrative District

Lahan Tambon Administrative Organization has 4 villages including of Baanpakprag village, Baannong-i-ruen village, Baanponglanduan and Baanmomui village.

3) The Administrative Structure of Lahan Tambon Administrative Organization

The administrative structure of Lahan TAO are Division of Chief Administrative of SAO, Division of Civil Works Technician, Division of Fiscal office, Division of Public Health and Environment, Division of Education, culture and religion, Division of Social welfare, and Division of agriculture promotion.

The Developing Strategy of Lahan Tambon Administrative Organization 2006-2008

Strategy 1: Constructing road and culvert

Strategy 2: Improving road and culvert

Strategy 3: Extending transportation surface

Strategy 4: Improving and repairing road

Strategy 5: Constructing the bridge

Strategy 6: Setting up street sign

Strategy 7: Setting up lamp pose

Strategy 8: Constructing multipurpose building

Strategy 9: Improving, repairing and modifying building

Strategy 10: Constructing barrier

4) The Financial Status of Lahan Tambon Administrative Organization of B.E. 2545

The budget for IM Network Center in FY 2007 is 52,000 Baht, in FY 2008 is 74,000 Baht.

3) Administrative Structure

The administrative structure of Jomphonjaopraya TAO is Division of Chief Administrative of SAO, Division of Civil Works Technician, Division of Fiscal office, Division of Public Health and Environment, Division of Education, culture and religion, Division of Social welfare, and Division of agriculture promotion.

The Developing Strategy of Jomphonjaopraya Tambon Administrative Organization 2006-2008

Strategy 1: Improving quality and standard of traffic surface

Strategy 2: Constructing enough culvert for all area service

Strategy 3: Improving quality of water pipe

Strategy 4: Extending electricity service area

Strategy 5: Promotion to sustainable utilize of the land

Financial status of Jomphonjaopraya Tambon Administrative Organization of B.E. 2545.

The budget for IM Network Center in FY 2007 is 189,500 Baht, in FY 2008 is 138,700 Baht.

6. Mabyangporn Tambon Administrative Organization

1) Location and Territory

Mabyangporn TAO is far from Plouk Daeng district about 4 kilometers. It shares its borders with Plouk Daeng Tambon, Plouk Daeng district in the north; Nikompattana Tambon in the south; Kaomaikaew Tambon, Borwin district and Sriracha district in the west; Maenamkhu Tambon, Plouk Daeng district in the east. Mabyangporn Tambon Administrative Organization has land area of 81.072 kilometer squares.

Strategy 2: Extending electricity area service, improving lamp post, installing electrical meter

Strategy 3: Digging up shallow water pool, dredging up backwater, digging up deep water pool and improving water pool

Strategy 4: Constructing water supply tank, buying fiber water container

Strategy 5: Managing and improving city zoning

Financial status of Mabyangporn Tambon Administrative Organization of B.E. 2545.

The budget for IM Network Center in FY 2007 is 1,003,150 Baht, in FY 2008 is 930,510 Baht.

7. Nongrai Tambon Administrative Organization

1) Location and Territory

Nongrai TAO located on Pakprak – Nongrai road, 3rd villages, Nongrai Tambon, Plouk Daeng district, Rayong province. Its area service is about 151 kilometer squares. It shares its borders with Nongsuachang Tambon, Nongyai district, Chonburi province and Tasit Tambon, Plouk Daeng district in the north; Nongbuo Tambon, Baankai district, Rayong province in the south; Lahan Tambon, Plouk Daeng district in the west; Payupnai Tambon, Wangchan district, Rayong province in the east.

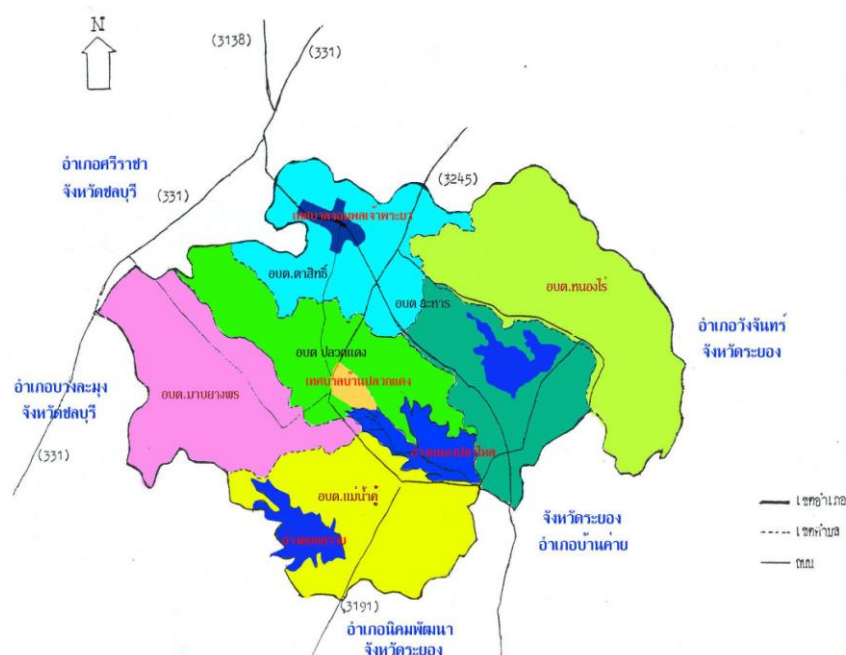


Figure C5 Nongrai Tambon Administrative Organization Map

2) Administrative District

Nongrai TAO has 6 villages, Baan Kloungnamdang, Baan Beungtata, Baan Nongrai, Baan Kloungpawai, Baan Kloungnamdum, and Baan Kaokloungsong.

3) The Administrative Structure of Nongrai Tambon Administrative Organization

The administrative structure of Nongrai TAO includes of 1. Division of Chief Administrator of SAO, 2. Division of Civil Works Technician, 3. Division of Fiscal Office, 4. Division of Public Health and Environment, 5. Division of Education, Culture and Religion, 6. Division of Social Welfare, and 7. Division of agriculture promotion.

4) The Developing Strategy of Nongrai Tambon Administrative Organization 2006-2008

Strategy 1: Digging up shallow water pool in 6 villages

Strategy 2: Enlarging water pool in the 2nd village

Strategy 3: Dredging up shallow water pool in 6 villages

Strategy 4: Dredging up dam for agriculture purpose in 5 villages

Strategy 5: Improving and cleaning artesian well all over villages

Strategy 6: Constructing dam for agriculture purpose

Strategy 7: Setting up water pump and water pipe

Strategy 8: Improving village water supply system

Strategy 9: Enlarging water pool in Kloungnamdang village

Financial status of Nongrai Tambon Administrative Organization of B.E. 2547

The budget of Nongrai Tambon Administrative Organization is as follow:

Local Levied Taxes:	435,816	Baht
Taxes Levied by government:	4,036,480	Baht
General grants from national government:	1,987,123	Baht
Value-add Tax according to decentralization act:	813,949	Baht
Total:	7,273,368	Baht

The budget for IM Network Center in FY 2007 is 71,052 Baht, in FY 2008 is 90,870 Baht.

8. Maenamkhu Tambon Administrative Organization

1) Location and Territory

Maenamkhu TAO locates on Plouk Daeng-Mabtaput, No. 84, 5th village, Maenamkhu Tambon, Ploukdaeng district, Rayong province. Total areas are about 112.23 kilometer squares. It shares its borders with Plouk Daeng Tambon, Plouk Daeng district, Rayong province in the north; Nikompattana Tambon, Rayong province in the south; Mabyangporn Tambon, Plouk Daeng district in the west; Nonglalog Tambon, Baankai district in the east.

Strategy 1: Transportation

Approach 1: perform 6 projects of concrete and asphalt road construction

Approach 2: construct culverts

Approach 3: maintenance roads

Approach 4: construct gravel roads

Strategy 2: Water supply service

Approach 1: set up water supply system

Approach 2: extend area service of village water supply system

Approach 3: dredged up dam and natural water resources

Strategy 3: Traffic facilities

Approach 1: set up lamp post

Approach 2: maintenance lamp post

Approach 3: install more electrical adapter

Approach 4: set up traffic light

Approach 5: extend electricity service area

Approach 6: set up traffic sign and guide board

The financial status of Maenamkhu Tambon Administrative Organization of B.E. 2547

The budget of Maenamkhu TAO is as follow:

Local Levied Taxes:	2,127,692.27	Baht
Local Levied fee and fine:	326,631.40	Baht
Taxes Levied by government:	11,481,945.54	Baht
Income from property:	34,494.22	Baht
General grants from national government:	6,819,790.00	Baht
Specific objective grants:	1,898,500.00	Baht
Miscellaneous income:	134,500.40	Baht

The budget for IM Network Center in FY 2007 is 285,400 Baht, in FY 2008 is 242,700 Baht.

3) The Administrative Structure of Tasit Tambon Administrative Organization

The administrative structure of Tasit TAO includes Division of Chief Administrator of SAO, Division of Civil Works Technician, Division of Fiscal Office, Division of Public Health and Environment, Division of Education, Culture and Religion, Division of Social Welfare, and Division of agriculture promotion.

4) The Developing Strategy of Tasit Tambon Administrative Organization 2006-2008

The infrastructure development strategies of Tasit Tambon Administration Organization are as follow:

Strategy 1: Light post service

Approach 1: Maintenance light post all over area service

Approach 2: Extend electricity service area

Approach 3: Set up light post around sport field in Klonggram school

Strategy 2: Water supply service

Approach 1: Improve water supply system in Klonggram village

Approach 2: Construct water supply post on Klonggram intersection

Approach 3: Dig up deep water pool in Nuenkrabok village

Approach 4: Dig up deep water pool in Klouggram village

Approach 5: Dig up shallow water pool in the 1st village

Approach 6: Construct village water system in Baannongbon and Baankaonoi

Approach 7: Dig up artesian well in Baannongbonnok

Approach 8: Dig up deep water pool in Baankaonoi, Baantaisun, Nongbon temple, Kaonoi temple, Nuensamran, Saisancho

Approach 9: Dig up shallow water pool in the 2nd and 4th village

Approach 10: Dig up multipurpose deep water pool in the 4th village Nongpakbung and the 2nd village Mabkainao

Approach 11: Improve form former shallow in the 1st and 2nd village

Approach 12: Dredged up dam for agriculture in Nongmaikan

Approach 13: Build dam

Approach 14: Construct village water supply system in Rimtan village

Approach 15: Extend water supply service area

Approach 16: Improve shallow water pool

Strategy 3: Transportation

Approach 1: Construct water way

Approach 2: Construct gravel road

Approach 3: Construct concrete roads

Approach 4: Construct asphalt roads

Approach 5: Maintenance culvert

Approach 6: Set up speed warning system

Approach 7: Cutting off grass on street shoulder

Approach 8: Construct bridge

Approach 9: Adjust street landmark

Financial status of Tasit Tambon Administrative Organization of B.E. 2547.

The budget for IM Network Center in FY 2007 is 202,097 Baht, in FY 2008 is 328,822 Baht.

10. Baanplouk Daeng Tambon Municipality

1) Location and Territory

Baanplouk Daeng Tambon Municipality lacates in Plouk Daeng district, Rayong province. Total area is about 2,866 kilometer squares. It shares its border with Nongsuachang Tambon, Nongyai district, Chonburi province in the north; Plouk

Daeng Tambon, Plouk Daeng district, Rayong province in the south; Kaokansong Tambon, Sriracha district, Chonburi in the west; Nonglai Tambon, Lahan Tambon, Plouk Daeng district in the east.

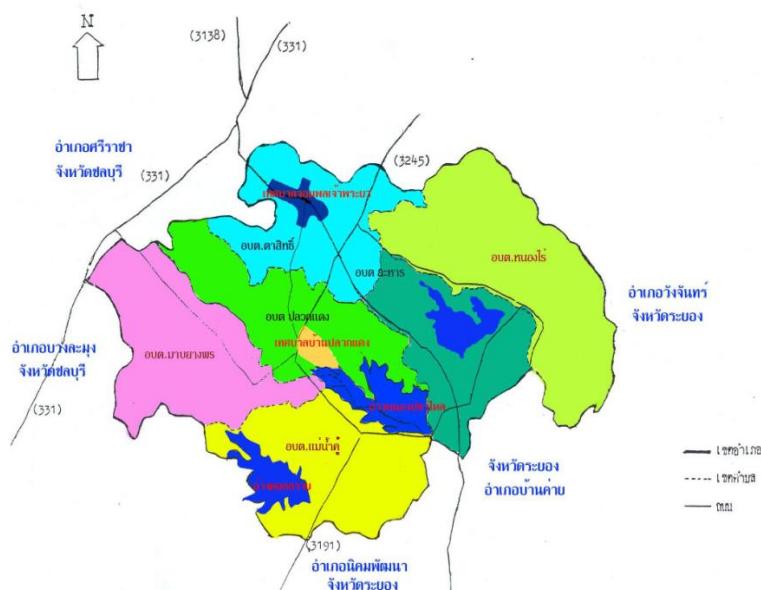


Figure C8 Baanplouk Daeng Tambon Municipality Map

2) Administrative District

Baanplouk Daeng Tambon Municipality covers the some part of Tambon Plouk Daeng.

3) The Administrative Structure of Baanplouk Daeng Tambon Municipality

The administrative structure of Baanplouk Daeng TAO includes Division of Chief Administrator of SAO, Division of Civil Works Technician, Division of Fiscal Office, Division of Public Health and Environment, Division of Education, Culture and Religion, Division of Social Welfare, and Division of agriculture promotion

The Developing Strategy of Baanplouk Daeng Tambon Municipality 2006-2008

4) The infrastructure development strategies of Baanplouk Daeng Tambon

Municipality follow:

Strategy 1: Infrastructure

Approach 1: Set up street board and traffic sign

Approach 2: Construct road gate

Strategy 2: Electricity service

Approach 1: Extend electricity service around prison temple

Approach 2: Set up lamp post along Prison temple-

Klounploukdaeng road

Approach 3: Set up lamp post along Tessabanpattana road

Approach 4: Set up post along Prachakobou to Lungchaluey

intersection

Strategy 3: Water supply service

Approach 1: Dredged up sediment in water supply tank

Approach 2: Verify quality of water supply for drink

Approach 3: Improve water supply system

The financial status of Baanplouk Daeng Tambon Municipality of B.E. 2547

The budget of Baanplouk Daeng Tambon Municipality is as follow:

FY 2007 = 300,000 Baht

FY 2008 = 300,000 Baht

The needs of infrastructure activities in this PCP are various depending on each LGO geography. The slope area encounters the flood disaster and overflow from hill cutting off its transportation path, damaging bridge and road. So, major task of these LGOs are maintenance of damaged roads and bridges.

For LGO, where lack of natural water sources; River and ground water, their major task is to deal with water scarcity problem by constructing water tank and water supply system in village area. And all LGOs usually face the thunderbolt strike, lamppost and limitation of electricity as the common problems.

All infrastructure activities of LGOs in Plouk Daeng district can be shown as the following table.

The potentiality of LGOs in Infrastructure Management based on their budget for infrastructure activities in 2006 as can be shown in following table.

Table C2 Infrastructure Management Capability of Eight LGOs in Plouk Daeng District

Capacity	Baan Pluak Daeng Municipality	Jomphon Chao praya Municipality	Plouk Daeng TAO	Mabyang porn TAO	Mae namkhu TAO	Tasit TAO	Lahan TAO	Nongrai TAO
Budget for infrastructure 2006	4,310,800	7,325,900	688,000	1,003,150	5,850,000	10,156,100	1,000,000	6,800,000
Staff in division of public work	9	6	6	6	5	4	1	2
Basket crane car	1	-	1	1	1	-	-	-
Dump truck	1	-	-	-	-	-	-	-
Water truck	1	1	1	-	1	-	-	1
Crushing machine	-	-	-	-	1	-	1	-
Electric fixing device set	-	-	-	1	-	-	-	-
Tractor	-	-	1	-	-	-	-	-
Water pump	2	-	-	1	-	-	-	-

APPENDIX D

The Infrastructure Management Pilot Cooperated Project

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The Infrastructure Management Pilot Cooperated Project

1. The Infrastructure Management Network Center

Before establishing the Center of Infrastructure Management (referred as “the Infrastructure Management (IM) Network Center” hereafter in this chapter) among the LGOs in Plouk Daeng was performed, it found that all 8 LGOs in Plouk Daeng have cooperated in performing some levels of local activities. There were 2 cooperated projects in the past. The first project is the cooperation in drugs prevention and protection. This cooperation project occurred by following the government policy, which the budget was allocated from the official agencies to the local areas. Such project was performed by the executives who responded for administrative committee of all 8 LGOs in Plouk Daeng. Because this cooperative project is the project that was initiated by government policy, the activities of the project were not directly responded by the local residents from 8 LGOs. It seems that there has not participation of local residents in this cooperative project.

The second cooperation project is the cooperation initiated from the need of local LGOs themselves. It is built from the personal relationship among the local executives who have the similar wants. The second cooperation project is Garbage Management in the areas of Plouk Daeng. To perform such activity, each LGO needed to send its representatives to participate in the project. The LGOs representatives acted as the committee of the project. The committee needed to go to study the operation of Garbage Management to find guideline for building the landfill pit for the LGOs in Plouk Daeng. The committee of the cooperation project went to study the operation of Garbage Management only one time. There was no any activity associated with Garbage Management afterwards. Such subject was neglected until the conference of the committee under the IM Network Center took it to consider

again, which was not the same type of cooperative project that DOLA assigned to Plouk Daeng district, Rayong.

If the Infrastructure Management PCP that was initiated by DOLA is considered, there has one problem that 8 LGO members faced in the past. The common problem is that contracting out the private company cannot timely resolve infrastructure damaged from natural perils because of bureaucratic procedure red tape. Especially for emergency case, such as bridge and road were destroyed by rushing water, LGO cannot deal with the trouble immediately. Because of the local regulation of contracting, it takes time at least for a week to approve contract. For this reason, DOLA think that if LGOs in Plouk Daeng district, Rayong cooperated together to set up the local cooperation Network Center, they should have more efficiency than each LGO run the Infrastructure Management activities by self.

Another problem of Infrastructure Management activities is that most contractors are not intent to contract with LGO to operate maintenance project because the project price is lesser than new constructing project. This problem can mostly occur in remote LGOs who have less money. As a result, many maintenance activities of LGOs had not been run yet. For this reason, small remote LGO will be befitted from local cooperation Network Center. Unfortunately, all 8 LGOs in Plouk Daeng district, Rayong who were selected to cooperate in the Infrastructure Management Pilot Cooperated Project have similar in size. Due to they have same capacity in Infrastructure Management, no one LGO can helped others.

The structure of the IM Network Center consists of the Network Center committees who come from the local executives, chief administrators and representative of the council from all 8 LGOs. The total committees of the IM Network Center are 24 persons. The chief executive of Plouk Daeng TAO is the chairman of the IM Network Center and the chief executive of Tasit TAO and the chief executive of Lahan TAO are vice chairman of IM Network Center. The location of IM Network Center is Plouk Daeng TAO, the same place as chairman work. The structure of IM Network Center committee is shown as below figure.

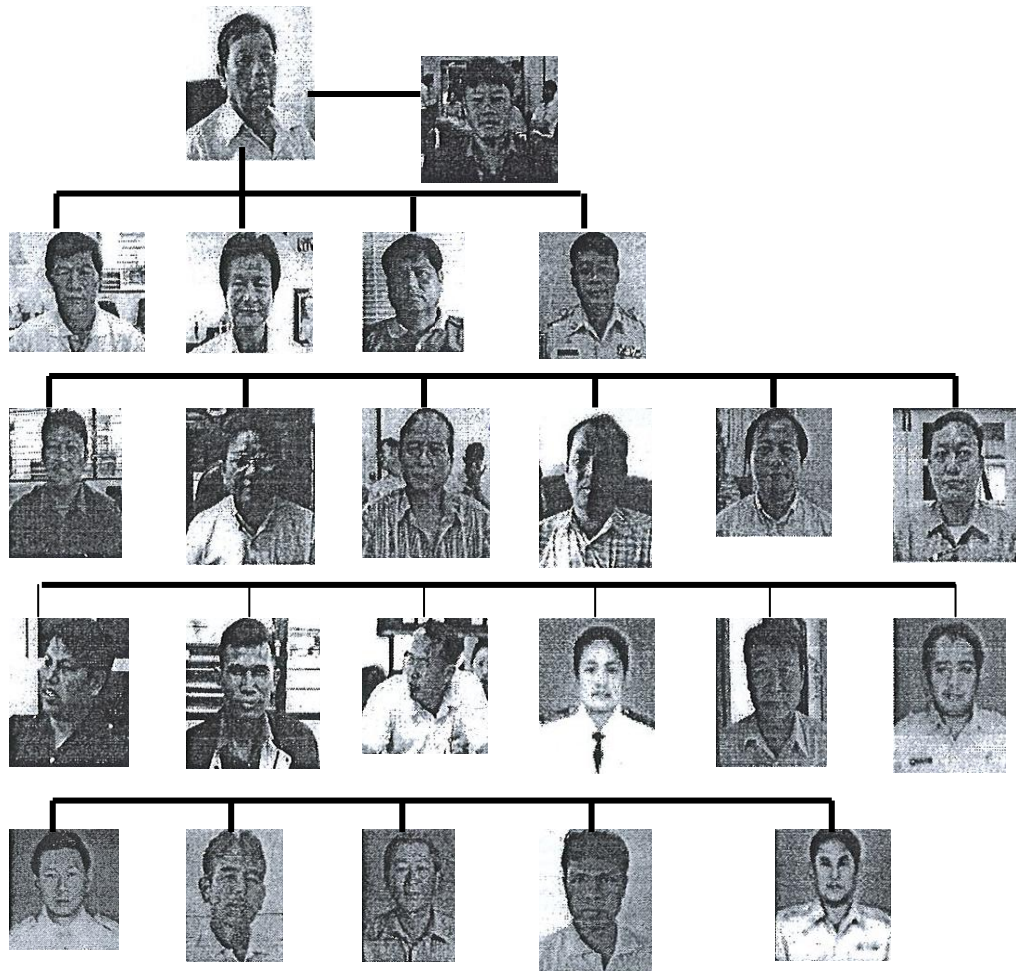


Figure D1 Infrastructure Management Network Center Committee

The authorities of the IM Network Center are as follows: appointing the sub-committee for performing the activities assigned by the IM Network Center committee, establishing the regulations for IM Network Center management, specifying the details of activity plan for infrastructure repairing and maintaining, commanding and assigning the parties/actors to perform performance plan of the IM Network Center and arranging the conference to acquire agreement about IM Network Center administration. Basically, the IM Network Center committee agrees to perform 2 main performances, i.e., repairing and maintaining roads and public electricity. The IM Network Center committee performed the selection and appointment of the chairman, vice chairman and secretary of the IM Network Center. The chief executive of Ploukdaeng TAO is the IM Network Center chairman. The

chief executive of Lahan TAO is the first vice chairman. The chief executive of Tasit TAO is the second vice chairman, and the chief administrators of the local government organizations that the chairman and the vice chairman being in the position are the secretary and the assistant secretary of the IM Network Center with the scope of performances as follows:

- 1) Repairing and maintaining land communication.
- 2) Repairing and maintaining water communication.
- 3) Repairing and maintaining constructions.
- 4) Building and places.
- 5) Repairing and maintaining public building and
- 6) Repairing and maintaining other infrastructures.

For the information about budget, the total budget for performance in B.E. 2550 was 2,893,825 baht. Such budget came from 3% of the capital budget for Infrastructure Management, which is agreeably supported by all 8 LGOs. The budget is as follows:

1) Baan Plouk Daeng Tambon Municipality	300,000	baht
2) Jom Pol Choa Praya Tambon Municipality	189,500	baht
3) Plouk Daeng TAO	810,000	baht
4) Mab Yang Porn TAO	1,003,150	baht
5) Mae Nam Koo TAO	285,400	baht
6) Ta Sit TAO	50,200	baht
7) Nong Rai TAO	53,478	baht
8) Plouk Daeng TAO	202,097	baht

For guideline for budget allocation for the IM Network Center's performances, the conference had the resolution to divide the budget into 2 parts, the first part is purchasing instruments for the IM Network Center's infrastructure activities and the second part that is remaining from the first part will be divided into 3 minor parts, i.e., the first minor part (70%) is for repairing, and maintaining infrastructure following the plan, the second minor part (20%) is for IM Network Center management activities and the third minor part (10%) was set up as the backup budget for performing the urgent activities, the disasters that have too much damage or the disaster that LGO members cannot handle by their own.

Moreover, three sets of committees who have the responsibility of setting up the performance plan for IM Network Center were appointed. Each set of committee consists of 5 persons. The three sets of committees are as follows:

The committee for making development plan for the IM Network Center

- 1) Mr. Somkiat Jongjitman: Chief administrator of Ploukdaeng TAO
- 2) Mr. Attapan Rakpollamueang: Chief administrator of Mae Nam Koo TAO
- 3) Mr. Thongchai Krittayawasukul: Member of the council of Ploukdaeng TAO
- 4) Mr. Nusan Surojwatthanakul: Chief executive of Nong Rai TAO
- 5) Mr. Satian Suakwan: Chairman of the council of Laharn TAO

The committee for surveying and estimating costs for the IM Network Center's activities

- 1) Mr. Jakkrapong Tathong: Chief administrator of Ban Ploukdaeng Tambon Municipality
- 2) Mr. Kien Thuekjaroen : Chief executive of Mae Nam Koo TAO
- 3) Mr. Seri Panjareon: Chief administrator of Nong Rai TAO
- 4) Mr. Sakulwatchara Hiamharn: Chief administrator of Jom Pol Choa Praya TAO
- 5) Mr. Poosit Pongnapadol: Chief administrator of Ta Sit TAO

The committee for monitoring and evaluating the results of development plan for the IM Network Center

- 1) Mr. Sakesan Kanvisit: Chief executive of Ta Sit TAO
- 2) Mr. Chaiyong Koopenwijittrakarn: Mayor of Baan Ploukdaeng Tambon Municipality
- 3) Mr. Lertlor Wiwatrattnasiri: Chief executive of Lahan TAO
- 4) Mr. Wichai Tahnbamrunrak: Chief executive of Ploukdaeng TAO
- 5) Mr. Prasith Sukjai: Chief executive of Mab Yang Porn TAO

The local cooperation IM Network Center in Plouk Daeng, Rayong consists of 8 LGO members, Ban Plouk Daeng Tambon Municipality, Jompol Chao Phraya Tambon Municipality, Ta Sit TAO, Mab Yang Porn TAO, Lahan TAO, Maenam Koo TAO, Nhong Rai TAO and Plouk Daeng TAO.

In the first year, the office of the IM Network Center was situated in the office of Plouk Daeng TAO because the Mayor of Plouk Daeng TAO is the director of IM Network Center. However, the IM Network Center director was changed later because the position period of the chief executive of Plouk Daeng TAO was expired. The IM Network Center administrative committee had a resolution to select the mayor of Baan Plouk Daeng Tambon Municipality to be the new IM Network Center director in September of 2008. So, the location of the office of the IM Network Center was moved to the office of Ban Plouk Daeng Tambon Municipality. The main duty of the IM Network Center is to perform the duty of repairing infrastructure such as road, bridge and electricity. The size of all service areas under the responsibility of the IM Network Center is totally 632.6 km². The total number of people who receive the service is 31,479 persons or 9,556 households as demonstrated in the below table.

Table D1 The Geographical Information of Eight LGOs in Plouk Daeng District

Member LGOs	Size of the Service Area (km²)	Number of Household (household)	Population (person)	Revenue for the project (Baht)	Number of Road in the Area (road)
Ban Plouk Daeng Tambon Municipality	2.86	2,199	3,192	300,000	43
Jompol Chao Phraya Tambon Municipality	2.84	330	1,543	138,700	11
Plouk Daeng TAO/	71.22	1,108	4,228	1,135,707	49
Mab Yang Porn TAO/	81.072	1,508	5,994	930,510	50
Maenam Koo TAO/	112.23	1,698	7,753	242,700	17
Ta Sit TAO /	123.26	995	5,112	328,822	69
Nhong Rai TAO/	155.11	821	4,319	90,87	16
Lahan TAO/	84	897	4,073	74,00	33
Total	632.60	9,556	31,479	3,241,134	288

From the below table, it can be seen that most of durable articles owned by the member LGOs are appropriate to be used only in small-scope activities, for example, electricity repair and covering cavity in the lateritic road as demonstrated in the following table.

Table D2 The Durable Articles Owned by Eight Parties/Actors of Infrastructure Management PCP.

Item of Durable Articles	Baan Plouk Daeng Tambon Municipality	Jompol Chao Praya Tambon Municipality	Plouk Daeng TAO	Mab Yang Porn TAO	Maenam Koo TAO	Ta Sit TAO	Lahan TAO	Nhong Rai TAO	Total
Electric crane	1	-	1	1	1	-	-	-	4
Back-sloped pickup	1	-	-	-	-	-	-	-	1
Water truck	1	1	1	-	1	-	-	1	5
Ground compactor	-	-	-	-	1	-	1	-	2
Set of electricity repair equipments	-	-	-	1	-	-	-	-	1
Water pump	2	-	-	1	-	-	-	-	3

The standard for allocating budget to support the IM Network Center is that the member LGOs must give 3% of its capital budget following prescriptions on budget of the previous fiscal year (excluding prescription on additional budget) as the grant to the IM Network Center. In FY2007, the total budget for supporting the performances of the IM Network Center, which is allocated from the parties/actors, is 2,913,199 baht. In FY2008, the IM Network Center receives the grant as supporting budget from the parties/actors for 3,241,134 baht in total. Nevertheless, such standard can bring injustice among the members of the IM Network Center because, in

practice, the actual spent budget may be not in accord with that specified in the prescriptions.

For that reason, for the FY2008 budget allocation, the IM Network Center committee has the resolution for establishing new standard. The new standard for calculating grant is that the parties/actors must give 3% of the capital budget in the category of land and construction that is actually withdrawn and paid in previous 2 fiscal years. That is because the total of such budget is more precise and can reflect the real capacity of each LGO. It means that, in FY2008, the LGOs will allocate grant in rate of 3% of the capital budget in the category of land and construction that is actually withdrawn and paid in FY2007 as demonstrated in below figure.

Table D3 The Allocating Budget of IM Network Center.

Member LGOs	FY2007		FY2008	
	Amount (Baht)	Percent	Amount (Baht)	Percent
Baan Plouk Daeng Tambon Municipality	300,000	10	300,000	9.26
Jompol Chao Praya Tambon Municipality	189,500	7	138,700	4.28
Plouk Daeng TAO	810,000	28	1,135,707	35.04
Mab Yang Porn TAO	1,003,150	34	930,510	28.71
Maenam Koo TAO	285,400	10	242,700	7.49
Ta Sit TAO	202,097	7	328,822	10.15
Nhong Rai TAO	71,052	2	90,870	2.80
Lahan TAO	52,000	2	74,000	2.29
Total	2,913,199	100	3,241,134	100

For the allocation of budget for supporting the performances of the IM Network Center, the IM Network Center has a resolution to plan budget disbursement by dividing the budget into 2 parts: the first part is for purchasing durable articles for

the performances of the IM Network Center and the second part is for spending in the administration of the IM Network Center. The budget of the latter part is divided into 3 parts. 70% of it is set for performing infrastructure repair according to the projects specified in the activity plan. The 10% of it is set for spending as compensation and cost of materials. Another 20% is the emergency budget for spending in performing the urgent projects of infrastructure repair and maintenances that is not specified in the annual activity plan of the IM Network Center.

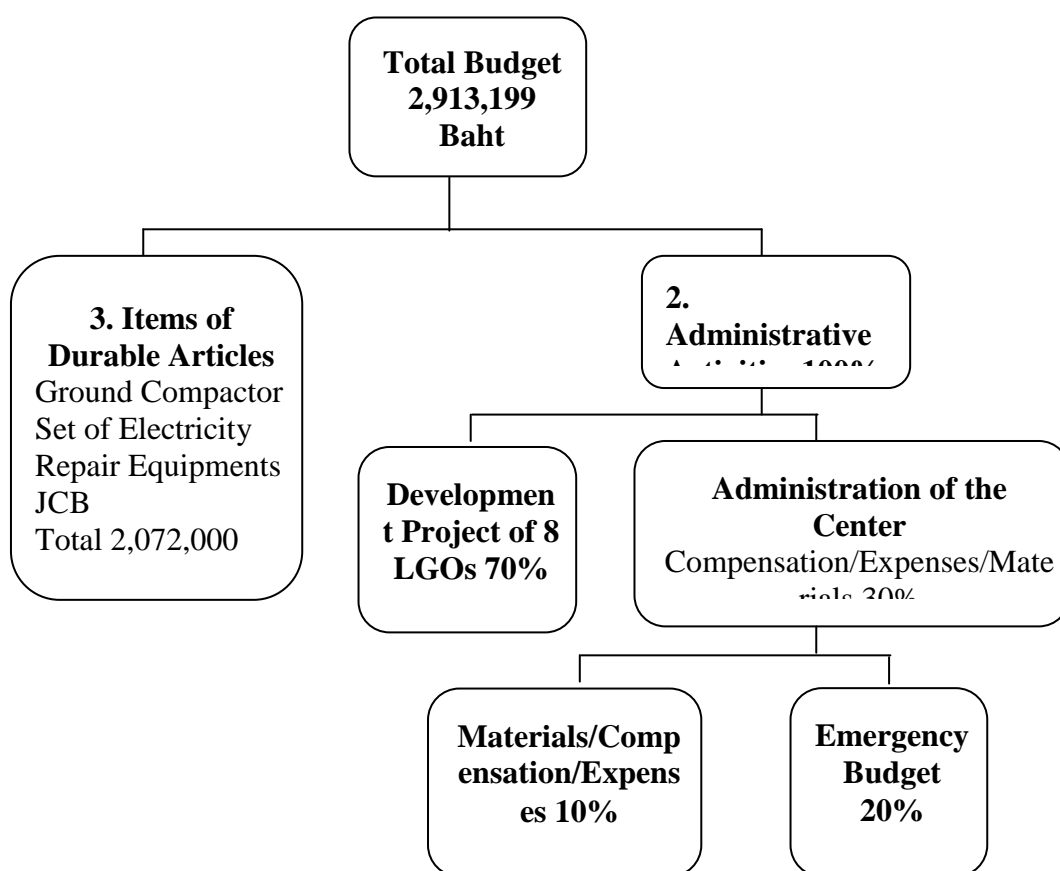


Figure D2 Budget of FY2007 of Infrastructure Management Network Center

The IM Network Center can finish 4 of those activities as follows:

1) Purchase of 3 durable articles; the total cost is 2,229,318 baht:

- | | | |
|---|-----------|------|
| (1) 3 sets of electricity repair equipments | 90,000 | baht |
| (2) 2 ground compactors | 29,318 | baht |
| (3) 1 JCB | 2,180,000 | baht |

2) The three projects on transportation ways improvement following the plan; the total cost is 245,000 baht:

(1) Repair of Pong Keng-Pong Bon Laterite Road in Nhong Rai TAO: 60,000 baht

(2) Repair of Lahan-Nhong Pla Lai Reservoir Rural Highway in Lahan TAO: 90,000 baht

(3) Repair and maintenance of Besides-the-Association Laterite Road of 3138 in Ta Sit TAO: 95,000 baht

3) Performing public electricity improvement and repair in the area of 4 parties/actors without spending the budget of the IM Network Center. This is because the IM Network Center performs this activity by jointing personnel and electric cranes. The LGOs who are the area owners, namely Jompol Chao Phraya Tambon Municipality, Lahan TAO, Mab Yang Porn TAO and Nhong Rai TAO, are responsible for the expenses for purchase materials for electricity repair;

4) Spending emergency budget for repairing the approach of Ban Nhong Rai Bridge in Nhong Rai TAO; the total cost is 99,000 baht.



Figure D3 Electricity Repair Equipments



Figure D4 Ground Compactors



Figure D5 JCB Picture



Figure D6 Larterial Road at Tambon Nong Rai



Figure D7 Larterial Road in Tambon Ta Sit



Figure D8 Electricity Fixing on Site

In conclusion, in FY2007, the IM Network Center can finish some activities according to the plan by using the budget for 2,643,318 baht in total. So, the remaining budget of the IM Network Center received from grant allocation by the members is 269,881 baht in 2007. This remaining budget is reserved as the accumulation of the IM Network Center for budget planning of 2008. The IM Network Center committee sets up the guideline for new method of distributing each part of the budget. This guideline is that using the total budget received from grant allocation by the members in 2008 to subtract with the budget for purchase of durable articles. And then, the remaining budget after subtracting will be distributed for spending in the administrative activities of the IM Network Center. This remaining budget is separated into 3 parts. The first part is used for performing the projects on infrastructure repair in the area of the members; the amount of this part is 800,000 baht. The second part is used as emergency budget; the amount of this part is 400,000 baht. The third part is used as the budget for the management of the office of the IM Network Center.

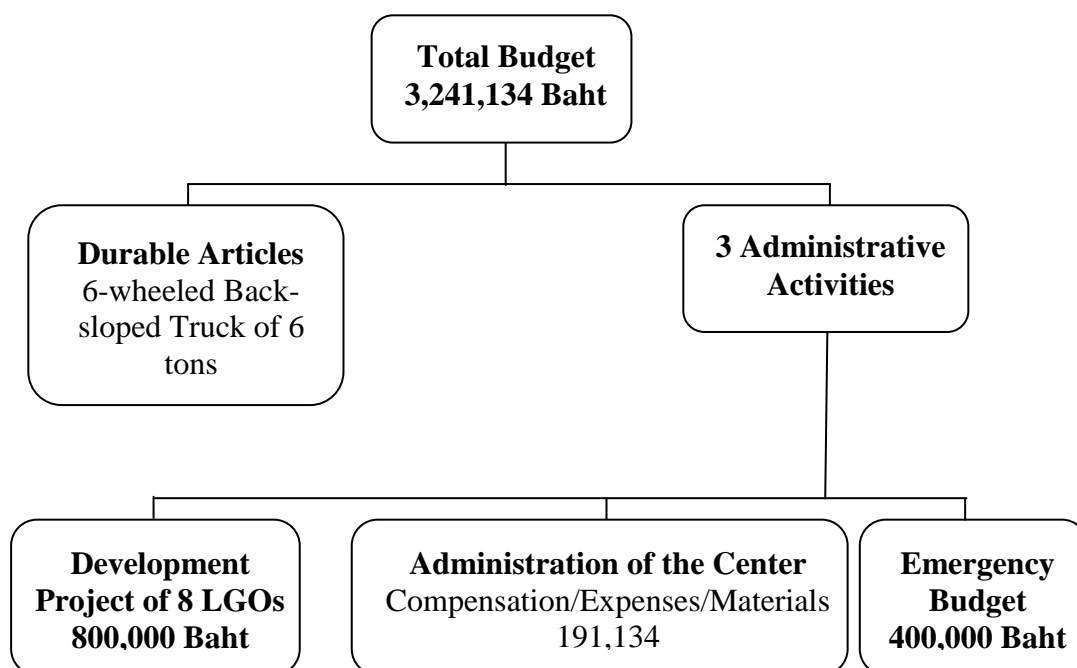


Figure D9 Budget of FY2008 of Infrastructure Management Network Center

The FY2008 activity plan of the IM Network Center contains 4 performance plans as follows:

1) Performance plan for purchase of 2 items of durable articles and equipments for implementation, namely 1 farm tractor which costs 1,000,000 baht and 1 back-slopped truck which costs 850,000 baht; the total budget for this performance is 1,850,000 baht;

2) Performance plan for performing 5 projects on improving transportation ways; the total budget for this performance is 486,000 baht. Those 5 projects are as follows:

(1) Repair of road surface in Lahan TAO: 68,000 baht

(2) Repair of road surface in Maenam Koo TAO: 100,000 baht

(3) Repair of Pak Tor-Ba Nai Tang Latrite Road in Mab Yang Porn TAO: 100,000 baht

(4) Repair of surface of Klong Nam Daeng Bueng Ta Tor Road in Nhong Rai TAO: 100,000 baht

(5) Repair of Mab Sai Road in Ban Pluak Daeng Tambon Municipality: 100,000 baht

3) Performance plan for performing 5 projects on public electricity repair and installation; the total budget for this performance is 332,000 baht. Those 5 projects are as follows:

(1) Public electricity repair and installation in Lahan TAO: 32,000 baht

(2) Public electricity repair in Maenam Koo TAO: No use of budget

(3) Public electricity repair in Ta Sit TAO: 10,000 baht

(4) Public electricity repair in Pluak Daeng TAO: 100,000 baht

(5) Public electricity repair and installation in the stadium in Jompol Chao Phraya Tambon Municipality: 100,000 baht

4) Performance plan for performing urgent infrastructure repair by using emergency budget of 400,000 baht. 18,000 baht of such budget had been allocated to the project on purchasing materials for repair of Mae Nam Koo-Wat Rai Road in Mae Nam Koo TAO;

5) Performance plan for spending the budget of the administration of the IM Network Center; the budget for this performance is 191,143 baht. 9,000 baht of this budget had been spent for 2 activities as follows:

- (1) Expenses for the arrangement of the 4/008 meeting: 3,750 baht
- (2) Expenses for the arrangement of the 5/2008 meeting: 5,250 baht

APPENDIX E

The General Information of Koh Kha, Lampang Province

APPENDIX E

The General Information of Koh Kha, Lampang Province

1. The General Lampang Area¹⁰

1) Location and Territory

Lampang province is situated in the northern of Thailand, far from Bangkok about 602 kilometers by car and about 625 kilometers by train. Its area site is about 12,533.961 kilometer squares (about 7,833,72 rai) which is large scale the fifth of the northern region, less scale than Chiangmai, Tak, Mae-hongson and Petchaboon. Lampang province is high from the sea scale about 268.80 meters. Almost of the area are the plasteau that was surrounded by many high mountain chains from the north to the south and some areas in the middle of province are the plain on the bank of river.

2) Administrative District

Lampang Province consists of 13 districts, 100 tambons and 912 villages. The 13 districts are Muang Lampang, Mae Mo, Ko Kha, Ngao, Some Ngam, Ngao, Chae Hom, Wang Nuea, Thoen, Mae Phrik, Mae Tha, Sop Prap, Hang Chat and Muang Pan. There are 104 units of local government in Lampang that compose of 1 Provincial Administrative Organization (PAO), 1 City Municipality, 1 Town Municipality, 15 Tambon Municipality and 86 Tambon Administrative Organization (TAO). The populations are 781,260 persons, which divide to 386,151 males and 395,109 females. The district that has people in the most is Muang Lampang (included the people in City Municipality), 229,947 persons as the detail in below table (Data based on December 31, 2005)

¹⁰ www.lampang.go.th, access to data on Oct 22, 2009

Table E1 The Detail of Area's Size, Administrative District and Population in Koh Kha, Lampang in year 2005

No.	District	Area (kilometer squares)	Administrative District				Population (person)
			Tambon	Village	Municipality	TAO	
1	Muang Lampang	1,156.623	19	141	4	11	229,947
2	Koh Kha	551.152	9	77	1	9	63,981
3	Chae Hom	1,349.121	7	62	1	7	42,659
4	Thoen	1,634	8	93	2	6	62,928
5	Hang Chat	684.757		73	1	7	51,387
6	Mae Tha	914.650	10	93	1	9	70,034
7	Ngao	1,815.313	10	84	1	9	58,943
8	Wang Nuea	1,034.323	8	79	2	8	45,326
9	Sop Proap	502.464	4	42	1	4	28,525
10	Mae Phrik	538.921	4	29	2	2	21,468
11	Some Ngam	631.727	4	42	1	4	32,757
12	Mae Mo	855.044	5	42	0	5	38,720
13	Muang Pan	865.103	5	55	0	5	34,585
	Total	866,722.91	100	912	17	86	781,260

Lampang province has several natural resources especially for the forest that is about 4,896,875 rai or 62.51 percent at the present time. Moreover, there are amounts of several minerals these are essential for the industrial sector, such as lignite, marl, marble, granite, etc.

3) Economic Data

The economic data in Lampang province is divided into 5 types as follow:

(1) Gross Provincial Product

Lampang's Gross Provincial Product is about 38,469 million Baht. The most of revenue depends on wholesale and retail, that is 18.49 percent, value 7,115 million Baht. And the second is from tin mine and millstone enterprise and the industrial sector.

(2) Population Income

Population income in Lampang is average 48,726 Baht per person/year that is the fifth of the northern region.

(3) Monetary, Financial and Banking

There are 53 branches of commercial banks in Lampang in 2005. Lampang get the revenue from Tax, about 1,329,262 million Baht, which almost from Income Tax, Value Added Tax and Juristic Person' Tax.

(4) Industrial Sector

Industrial sector in Lampang is the industrial that almost depends on natural resource in the local site. This sector tends to expand more and more. The data in 2004 shown that has 1,768 industrial factories, investment fund about 55,537,228,915 Baht and 33,538 labors

(5) Agricultural Sector

Most of people in Lampang are in the agricultural sector. There are 143,648 households which occupy agriculture, about 52.93 percent.

The technical cooperation project on capacity building of local authorities to local cooperation and local public standards that studies of local cooperation among the local authorities for the public service "the garbage and disposal management" in lampang divides the public service zoning into 32 groups. The selected group for this project research consists of 4 sites (LP07) as follows:

2. Koh Kha Tambon Municipality

1) Location and Territory

Koh Kha Tambon Municipality¹¹, located in Koh Kha district, the upper northern of Thailand that covers some of three tambon areas (Tambon Sala, Tambon Ta Pha and Tambon Koh Kha). Its site is high from the sea scale about 270 meters. Its area is about 3.95 kilometer squares that generally compose of the plain on the bank of river, Wang River pass flow the middle of its area. It is far from Bangkok about 584 kilometers by using Paholyothin National Highway and about 15 kilometers from Lampang Province. Its area borders Sala Tambon in the north, Ta Pha Tambon in the south, Sala Tambon in the east and some of Sala and Koh Kha Tambon in the west.

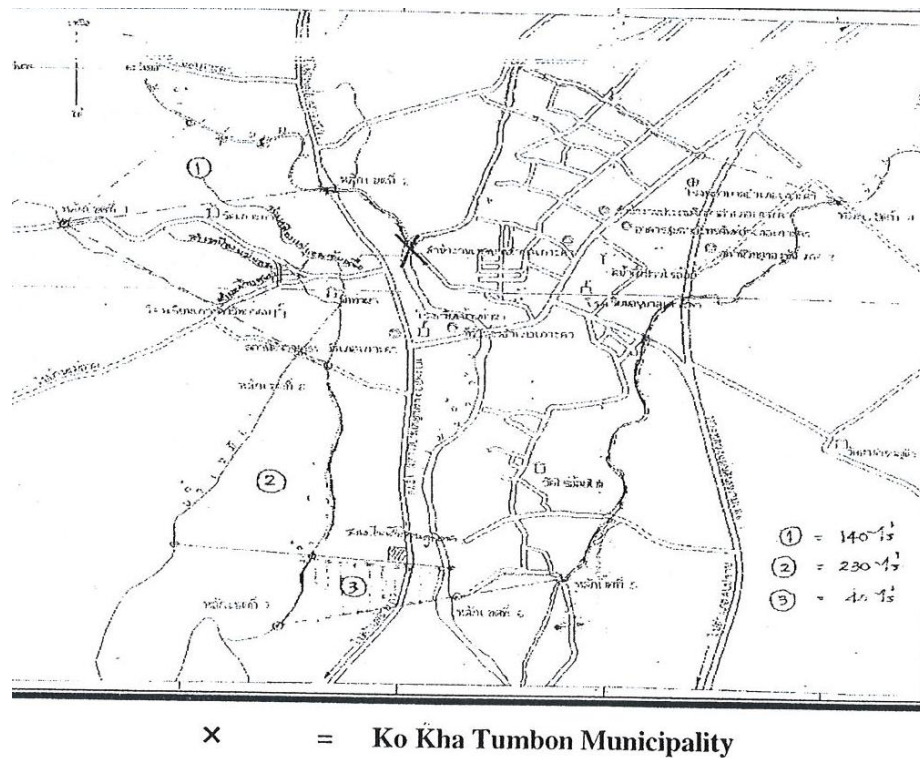


Figure E1 Koh Kha Tambon Municipality Map

¹¹Koh Kha Tambon Municipality, Draft of Developing Plan for 3 Years of Koh Kha Tambon Municipality (2006-2009),

2) Administrative District

Koh Kha Tambon Municipality consists of 8 communities of 5 villages (Moo 3, Moo 5, Moo 7 of Sala Tambon, Moo 4 of Ta Pha Tambon and Moo 5 of Koh Kha Tambon). Most of the communities are crowded around the market and industrial zone and the 2 side bank of Wang River.

3) The Administrative Structure of Koh Kha Tambon Municipality

The Administrative Structure of Koh Kha Tambon Municipality consists of 2 sectors as follows

(1) The Political Sector that composes of

The Executive Committee

Mayor	1	person
Deputy Mayor	1	person
Advisor to the Mayor	1	person

The Municipal Councilor

Chairman of the Municipal Council	1	person
Vice Chairman of the Municipal Council	1	person
Member of the Municipal Council	1	person

(2) The Administrative Sector that composes of

Municipal Officer	20	persons
Ordinary Employee	9	persons
Part-time Employee	25	persons

Table E2 Personality Information of Koh Kha Tambon Municipality

Type of personnel	Amount (person)
Municipal Officer	20
Ordinary Employee	9
Part-time Employee	25
Total	54

4) The Developing Strategy of Koh Kha Tambon Municipality in Garbage Management in the future time

Koh Kha Tambon Municipality set the garbage and disposal management in the strategic plan for keep environment clean, shown in the draft of developing plan for 3 years of Koh Kha Tambon Municipality (2006-2009) as the following detail.

(1) To promote and campaign for categorizing garbage and disposal, to evoke communities' conscience for preserving environment for preserving environment and to keep clean communities long last forever.

(2) To promote for using the appropriate way of get rid of garbage and of remedy polluted water for preserving the environment.

(3) To improve/renovate the rest area, Public Park and health part in the community for better communities' atmosphere.

(4) To pay attention to control garbage management get hygiene, have enough for the garbage can in the community.¹²

5) The Budget of Koh Kha Tambon Municipality in the Garbage Management

Budgetary of fiscal year 2005

(1) Revenue that Koh Kha Tambon Municipality can get itself 918,038.75 Baht

(2) Revenue that supported from another government units 11,999,850.74 Baht

(3) Grant 22,219,846.00 Baht

(4) Total 36,137,735.49 Baht

The budget for garbage management center in FY 2005 is 1,704,652 Baht.

Budgetary of fiscal year 2006

(1) Revenue that Koh Kha Tambon Municipality can get itself 1,848,600.00 Baht

(2) Revenue that supported form another government units 11,340,000.00 Baht

(3) Grant 16,820,000.00 Baht

¹² Koh Kha Tambon Municipality, Draft of Developing Plan for 3 Years of Koh Kha Tambon Municipality (2006-2009), pp. 24-25.

(4) Total 30,008,600.00 Baht

The budget for GM Network Center in FY 2006 is 1,604,652 Baht.

3. Sala Tambon Administrative Organization

1) Location and Territory

Sala Tambon Administrative Organization (Sala TAO) is located far from Koh Kha district office about 4 kilometers. Its area is about 19.5 kilometer squares in Sala Tambon. Its area borders Kae Lang Nakhon Town Municipality in the north, Wang Prao TAO in the south, Nam Joe TAO in the east and Ta Pha TAO in the west.

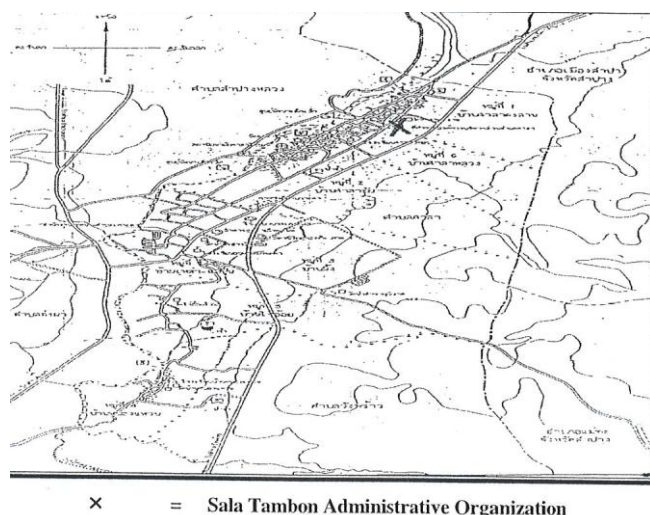


Figure E2 Sala Tambon Administrative Organization Map

2) Administrative District

Sala Tambon Administrative Organization (Sala TAO) has 4 villages which compose of 1,450 households: Moo 1 Baan Sala Donglan, Moo 2 Baan Salachai, Moo 4 Baan Nong Wan and Moo 6 Baan Sala Luang.

3) Administrative Structure of Sala Tambon Administrative Organization

The Administrative Structure of Sala Tambon Administrative Organization is concluded in below table.

Table E3 Personality Information of Sala Tambon Administrative Organization

Type of personnel	Amount (persons)
Office of the chief administrator of TAO	7
Division of Fiscal	5
Division of Civil Works	1
Total	13

4) The Developing Strategy of Sala Tambon Administrative Organization in Garbage Management in the future time

Sala Tambon Administrative Organization has the plan to buy a garbage truck to keep garbage managing process by itself. Moreover, Sala Tambon Administrative Organization set the garbage and disposal management in the strategic plan for keep environment clean, shown in the draft of developing plan for 3 years of Sala Tambon Administrative Organization (2006-2009) as the following detail.

(1) Categorizing Disposal Campaign and Distributing the Garbage Can project that set in the developing plan for 3 years of Sala Tambon Administrative Organization (2006-2009). This project has approximately spending of budget about 100,000 Baht in each year.

(2) The Recycle project that set in the developing plan for 3 years of Sala Tambon Administrative Organization (2006-2009). This project has approximately spending of budget about 100,000 Baht in each year also.

The Budget of Sala Tambon Administrative Organization in the Garbage Management

Budgetary of fiscal year 2005

(1) Revenue that Sala Tambon Administrative Organization can get itself 845,340.50 Baht

(2) Revenue that supported form another government unit 9,056,688.30 Baht

(3) Grant 3,300,879.00 Baht

(4) Total 13,202,907.80 Baht

There is no budget for GM Network Center in FY 2005.

Budgetary of fiscal year 2006

(1) Revenue that Sala Tambon Administrative Organization can get itself
819,700.00 Baht

(2) Revenue that supported from another government units 5,675,600.00
Baht

(3) Grant 2,000,000.00 Baht

(4) Total 8,495,300.00 Baht

The budget for GM Network Center in FY 2006 is 100,000 Baht.

4. Ta Pha Tambon Administrative Organization (Ta Pha TAO)¹³

1) Location and Territory

Ta Pha Tambon Administrative Organization (Ta Pha TAO) is located in the upper north, far from Koh Kha district office about 3 kilometers and 15 kilometers from Lampang Province. Its area is about 15 kilometer squares. Its area borders Lampang Luang TAO in the north, Na Kaew TAO in the south, Sala TAO in the east and Kop Kha TAO in the west.

¹³ [Ta Pha Tambon Administrative Organization, Developing Plan for 3 Years of Ta Pha Tambon Administrative Organization \(2006-2009\), pp. 7-15.](#)

Table E4 Personality Information of Ta Pha Tambon Administrative Organization

Type of personnel	Amount (person)
Office of the chief administrator of TAO	3
Division of Fiscal	4
Division of Civil Works	2
Total	9

4) The Developing Strategy of Ta Pha Tambon Administrative Organization in Garbage Management in the future time

Ta Pha Tambon Administrative Organization has the plan setting for run garbage and disposal managing process in the fiscal year 2006 about 2 projects, which are

(1) Project of promoting and campaigning to reduce the garbage in the household. By setting to get budgeting from the general grant that estimate for 20,000 Baht.

(2) Project of supporting grant for burying garbage to Koh Kha Municipality about 20,000 Baht.

5) The Budget of Ta Pha Tambon Administrative Organization in the Garbage Management

Budgetary of fiscal year 2005

(1) Revenue that Ta Pha Tambon Administrative Organization can get itself 303,900.00 Baht

(2) Revenue that supported from another government unit 4,673,000.00 Baht

(3) Grant 3,902,504.00 Baht

(4) Total 8,879,404.00 Baht

The budget for Garbage Management Network Center in FY 2005 is 60,000 Baht.

Budgetary of fiscal year 2006

(1) Revenue that Ta Pha Tambon Administrative Organization can get itself 304,700.00 Baht

(2) Revenue that supported from another government units 635,300.0 Baht

(3) Grant 3,900,000.00 Baht

(4) Total 9,900,000.00 Baht

The budget for Garbage Management Network Center in FY 2006 is 200,000 Baht.

5. Koh Kha Tambon Administrative Organization (Koh Kha TAO)¹⁴

1) Location and Territory

Koh Kha Tambon Administrative Organization (Ko Kha TAO) is located in Nong Lai, Moo 4 that has area borders Lampang Luang Tambon in the north, Na Kaew Tambon in the south, Ta Pha Tambon in the east and Lai Hin Tambon in the west. The area of Ko Kha TAO is 15 kilometer square.

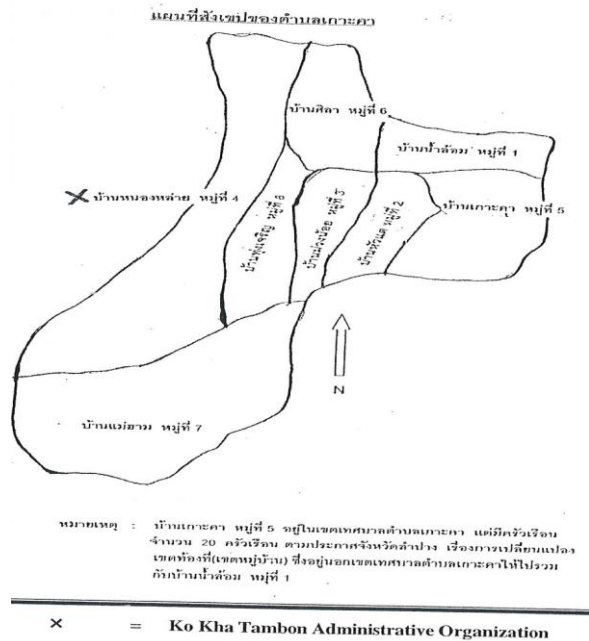


Figure E4 Koh Kha Tambon Administrative Organization Map

¹⁴ Koh Kha Tambon Administrative Organization, Developing Plan for 3 years of Koh Kha Tambon Administrative Organization (2006-2009), p. 29

2) Administrative District

Koh Kha Tambon Administrative Organization (Koh Kha TAO) has 7 villages which compose of 913 households: Moo 1 Baan Narn Lom, Moo 2 Baan Hua Tae, Moo 3 Baan Muang Noi, Moo 4 Baan Nong Lai, Moo 6 Baan Sila, Moo 7 Baan Ham and Ham and Moo 8 Baan Tung Charoen.

The Administrative Structure of Koh Kha Tambon Administrative Organization

3) The Administrative Structure of Koh Kha Tambon Administrative Organization is concluded in below table

Table E5 Personality Information of Koh Kha Tambon Administrative Organization

Type of personnel	Amount (person)
Office of the chief administrator of TAO	6
Division of Fiscal	4
Division of Civil Works	2
Total	12

4) The Developing Strategy of Koh Kha Tambon Administrative Organization in Garbage Management in the future time

Koh Kha Tambon Administrative Organization set the plan for garbage and disposal management in the strategy of developing environment, shown in the developing plan for 3 years of Koh Kha Tambon Administrative Organization (2006-2009) 4 projects that compose of

(1) Project of buying the garbage truck that set to run process in the fiscal year 2007, approximately set budgeting about 150,000 baht

(2) Project of buying the garbage can that set to run process during the fiscal year 2007-2008, approximately set budgeting about 140,000 baht per fiscal year (7 projects). Then, the approximately total budgeting are about 420,000 baht (21 projects).

(3) The Recycle Project that set to run process during the fiscal year 2007-2008, approximately set budgeting about 140,000 baht per fiscal year (7

projects). Then, the approximately total budgeting are about 420,000 baht (21 projects).

(4) Project for making compost from wet garbage that set to run process during the fiscal year 2007-2008, approximately set budgeting about 140,000 baht per fiscal year (7 projects). Then, the approximately total budgeting are about 420,000 baht (21 baht).

(5) Moreover, Koh Kha Tambon Administrative Organization still set the plan for Garbage Management in the strategy of developing of public health for 1 project, that is the project of fully process of garbage managing, that set to run process in the fiscal year 206, approximately set budgeting about 300,000 baht.¹⁵

5) The Budget of Koh Kha Tambon Administrative Organization in the Garbage Management

Budgetary of fiscal year 2005

(1) Revenue that Koh Kha Tambon Administrative Organization can get by itself 750,378.86 Baht

(2) Revenue that supported from another government units 6,723,051.81 Baht

(3) Grant 3,412,692.00 Baht

(4) Total 10,886,123.05 Baht

The budget for Garbage Management Network Center in FY 2005 is 620,000 Baht.

Budgetary of fiscal year 2006 (Data based on Feb. 28, 2006)

(1) Revenue that Koh Kha Tambon Administrative Organization can get by itself 95,829.98 Baht

(2) Revenue that supported from another government units 1,761,521.71 Baht

(3) Grant 2,181,424.00 Baht

(4) Total 4,038,775.69 Baht

The budget for Garbage Management Network Center in FY 2006 is 100,000 Baht.

¹⁵ Ibid, p.31

The Garbage Management capability of 4 LGOs in Koh Kha, Lampang is shown as below table.

Table E6 Garbage Management Capability of Four LGOs in Koh Kha, Lampang

Capability	Koh Kha Tambon Municipality	Sala TAO	Ta Pha TAO	Koh Kha TAO
Budget for Garbage Management 2006 (Baht)	1,704,652	-	60,000	620,000
Budget for Garbage Management 2007 (Baht)	1,604,652	100,000	200,000	100,000
Personnel responsible for Garbage Management	12	-	-	2
Equipment				
- Garbage truck	2	-	-	-
- Garbage bin	600	-	-	-
Garbage dumping site (Rai)	-	24	-	-
Amount of garbage (Tons/day)	15	7	3	1-2
Management responsible	Self management	Hiring local people	Hiring local people	Hiring private company
Fee (Baht/month)	10	20-30	20	10
Amount of garbage collected (percentage of all households)	65	90	70	93

APPENDIX F

The Garbage Management Pilot Cooperated Project

APPENDIX F

The Garbage Management Pilot cooperated Project

1. Garbage Management Network Center

Before local cooperation for establishing the Center of Garbage Management (referred as “the GM Network Center” hereafter) between the local government organization in Koh Kha is performed, it found that all 4 local government organizations (LGOs) of Koh Kha, i.e. Koh Kha Tambon Municipality, Sala TAO, Ta Pa TAO and Koh Kha TAO, have cooperated in performing many activities because the borders of their areas are connected and they are situated on the banks of the same river.

Normally, they have performed the cooperation in many activities, especially the activities associated with utility management such as dike construction, draining gutter construction, mine digging and electric pumping station. Generally, the cooperation is in the form of performing the activities outside their own areas. For example, Ta Pa TAO which is full of mine wants to build electric pumping station in its own area, but the owners of such areas are people in the areas under the responsibilities of Koh Kha Tambon Municipality. Therefore, Ta Pa TAO cooperates with Koh Kha Tambon Municipality to build the electric pumping station for allowing people in the localities receiving advantage from it. Or in case Koh Kha Tambon Municipality asks for permission to dig the mines in Ta Pa TAO which is the area of mines, including constructing draining gutters, it shall allocate budgets for Ta Pa TAO to invest in performing such activities. In other words, Koh Kha Tambon Municipality is the investor whereas Ta Pa TAO provides the areas. From that, people in the areas of both local government organizations can receive advantages. Furthermore, there is the cooperation in arranging meeting for occupation associations, i.e. each local government organization gave knowledge to the visitors both about its own locality

and about locality of other 3 local government organizations, including taking them to visit both its own locality and others' locality. These are only some activities that all 4 local government organizations perform through the occupation, not to mention those associated with tradition, culture and lifestyle that make people in those 4 local government organizations having unity, which is the important basis of cooperation in every activity.

For Garbage Management, those 4 LGOs share the areas for waste disposal for long time ago. It is since those were public areas that people regard them as the areas within Koh Kha Sanitation because they are close to Pa Samran Temple, which is situated in Koh Kha Sanitation. People both from those 4 local government organizations and from others dispose waste here. Nevertheless, after TAOs were officially established, the areas must be divided to provide for each TAO by relying on the information from pictures photographed from satellite not the information from people in the community. It indicates that those areas belong to Sala TAO. The problem about the right in such area, although it does not occur yet, is likely to come up when the project on Capacity Building of Local Authorities through Local Public Standards and Local Cooperation was performed. For this reason, all 4 local government organizations are very glad and willing to be the pilot site for performing Garbage Management through local cooperation. In addition, their background information do not demonstrate any severe problem about Garbage Management and their areas are still half-urban-half rural, including solid waste are discarded from household, so it is not much difficult to perform Garbage Management in the areas of these LGOs. However, former performances about Garbage Management of those 4 LGOs depend on manpower; there is no hygienic system and form of Garbage Management. For this reason, the problem about remaining waste and stinking waste can occur. Besides, Koh Kha's communities are going to expand; many industrial plants and factories were built in the areas and in those adjacent to Koh Kha areas, especially ceramics factories. Therefore, the kind of solid waste is various. In addition, Koh Kha Tambon Municipality must unfairly carry more burdens for managing more waste discarded from other areas. For handling with these situations, including establishing guidelines for performing Garbage Management in future and solving the problems about it permanently, building local cooperation among 4 local

government organizations in Koh Kha is very necessary. Moreover, the Garbage Management PCP is the common needs of 4 LGOs in Koh Kha, Lampang.

The structure of the GM Network Center consists of the committee coming from the local executives, members of the local councils and associated officers, particularly the chief administrators of those 4 parties/actors (Koh Kha Tambon Municipality, Sala TAO, Ta Pa TAO and Koh Kha TAO); the total of the GM Network Center committee is 21 persons. The mayor of Koh Kha Tambon Municipality is the chairman of the GM Network Center, the chief executive of the Sala TAO, Ta Pa TAO and Koh Kha TAO are the vice chairman, the municipal clerk of Koh Kha Tambon Municipality is the secretary and the chief administrators of the rest are committee and assistant secretaries.

The municipal clerk (chief administrator) of GM Network Center chairman is appointed to be the chairman of the GM Network Center sub-committee. This is for the convenience in cooperating and managing the GM Network Center's performances. The chief administrators of the rest parties/actors are the committees. Additionally, other associated officers can be appointed to be the committees of the GM Network Center sub-committee depending on appropriateness and necessity.

The structure of GM Network Center sub-committee is as follows

- | | |
|-------------------------------|----------------|
| 1) Mr. Jongpisut Skpatitthita | Chairman; |
| 2) Mr. Chanuan Jirajarakool | Vice chairman; |
| 3) Mrs. Nat-anong Pittayaseni | Committee; |
| 4) Mrs. Srijantra Ong-aat | Committee; |
| 5) Ms. Bongkotch Boonjaroen | Committee; |
| 6) Mr. Chawarn Kaewlue | Committee; |
| 7) Mr. Roongtawee Sriwichai | Committee; |
| 8) Mr. Montian Sermtaisong | Committee. |

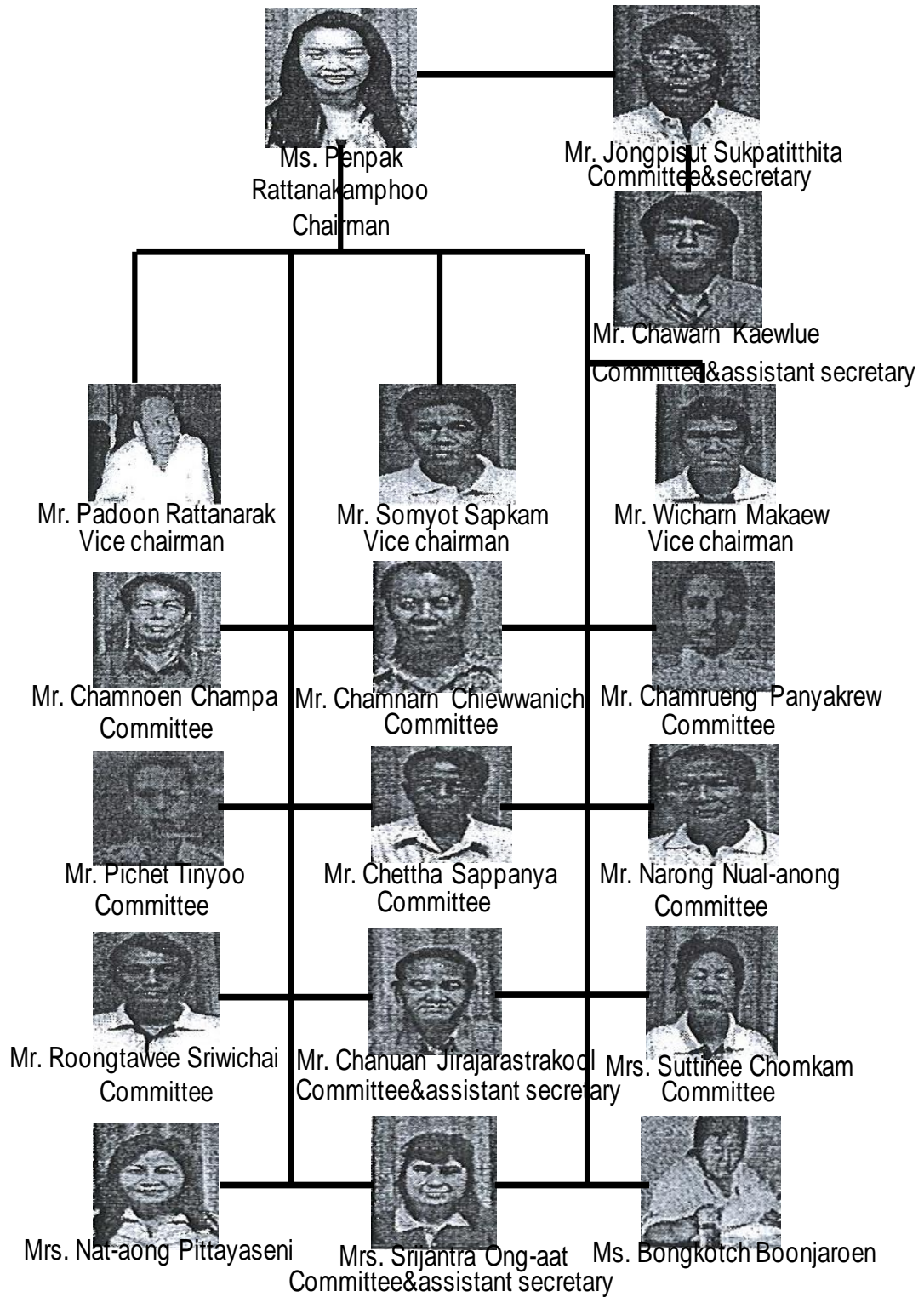


Figure F1 Garbage Management Network Center Committee

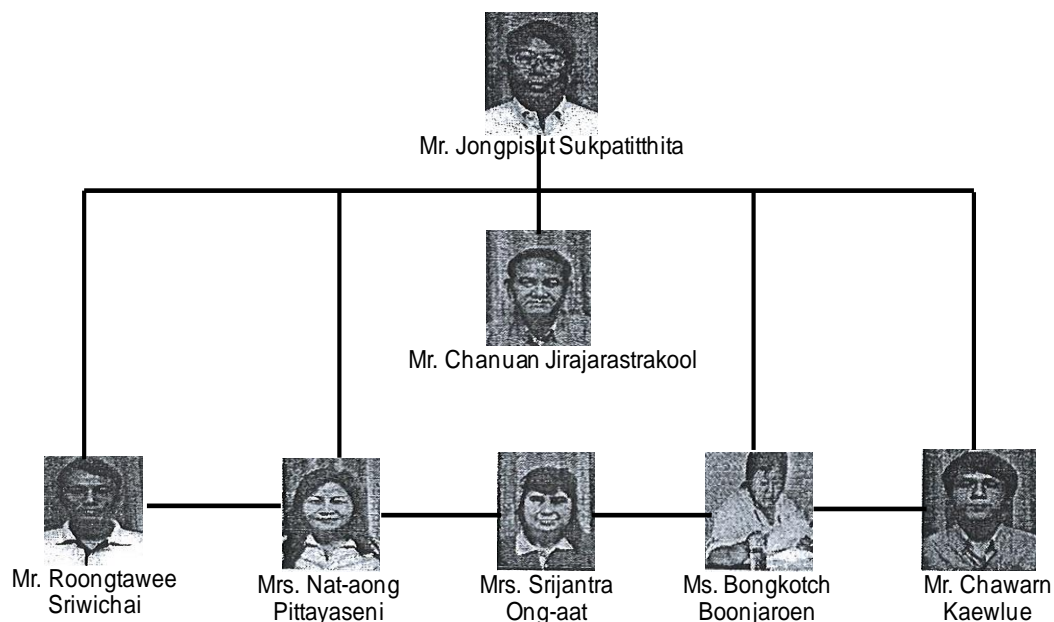


Figure F2 Garbage Management Network Center Sub-Committee

There are 3 main authorities of the GM Network Center.

- 1) Collecting,
- 2) Sorting and
- 3) Disposing solid waste.

The GM Network Center's performances performed since B.E. 2549 are shown below¹⁶

1) Setting 4 target villages for the project of sorting solid waste within the areas of the member, i.e. 1 village per each member.

2) Improving landfill pits by building the concrete wall in front of them, building sentry boxes, making signboards indicating that there is repairing lateritic roads in the sites for solid waste disposal and burying some parts of solid waste.

3) Improving personnel associated with Garbage Management such as garbage collectors.

4) Making public relations to acknowledge people in localities about the performance plan of the GM Network Center.

¹⁶ The presentation of the GM Network Center of Koh Kha, Lampang, 25th August B.E. 2549

Additionally, the performance plan for the GM Network Center B.E. 2550 and B.E. 2551 are as follow¹⁷

1) Making public relations, i.e. making signboards, media and documents to acknowledge the communities; arranging village conference, community conference, including Garbage Management competition among villages.

2) Campaigning sorting solid waste in the villages and mobilizing the conscious of people in the villages, communities and schools; the purposes for these are; sorting solid waste for 50% of the number of villages in B.E. 2550 and 100% in B.E. 2551; reducing the quantity of solid waste for 50% in B.E. 2550 and 80% in B.E. 2551 (comparing with B.E. 2549); and establishing the village waste bank for 50% in B.E. 2550 and 100% in B.E. 2551.

3) Developing the system of collecting solid waste as follows:

In B.E. 2550, there shall be 2 compressing trucks, 4 pick-ups, 1 sloping-back pushing truck and 1 saleng (waste cart).

In B.E. 2551, there shall be 2 compressing trucks, 4 pick-ups and 1 sloping-back pushing truck.

In B.E. 2552, the GM Network Center shall employ individual agencies to perform collecting solid waste and individual agencies can rent the vehicles of the GM Network Center.

4) Improving landfill pit as follows.

In B.E. 2550, designing landfill pit and burying solid waste by the same method.

In B.E. 2551, building the first landfill pit.

In B.E. 2552, burying the first landfill pit and building the second one.

In B.E. 2553, burying the second landfill pit and building the third one.

In B.E. 2554, burying the third landfill pit and building the fourth one.

In B.E. 2555, burying the fourth landfill pit and building the fifth one.

5) Studying recycling ceramics in B.E. 2550.

6) Campaigning about sorting solid waste from markets, industrial plants, official places, private places and temples in B.E. 2550.

¹⁷ The documents give in the third conference (3/2549) arranged at Koh Kha, Lampang on 25th August B.E. 2549

7) Making organic fertilizer in the villages and communities; the goal is for 50% in B.E. 2550 and 100% in B.E. 2551.

8) Selling organic fertilizer for; its goal is for 50% in B.E. 2550 and 100% in B.E. 2551.

9) Improving panorama surrounding the landfill pits.

10) Building the garbage furnace.

11) Destroying and burying hazardous waste.

The local cooperation of GM Network Center in Koh Kha, Lampang consists of 4 parties/actors, Koh Kha Tambon Municipality, Sala Tambon Municipality¹⁹, Ta Pa TAO and Koh Kha TAO. The office of the KM Network Center was situated in the office of Koh Kha Tambon Municipality. The mayor of Koh Kha Municipality is the GM Network Center chairman. The major duty of the GM Network Center is to perform solid waste disposal in the areas of the parties/actors, which is 52.95 km² in total. The total number of residents who receive the service is 20,454 persons or 6,790 households. The waste quantity in the areas under the responsibility of the GM Network Center at present is as demonstrated in the following table

Table F1 The Geographical Information of Four LGOs in Koh Kha, Lampang

Member LGOs	Area Zoning	Size of the Service Area (km²)	Number of Household (Households)	Population (person)	Revenue for Project, 2006	Waste Quantity in the Area (Ton/day)
Koh Kha Tambon Municipality	LP07	3.95	2,190	5,152	30,008,600	10
Sala Tambon Municipality	LP07	19	1,450	5,603	4,285,049	7
Ta Pa TAO	LP07	15	1,700	6,049	9,900,000	5
Koh Kha TAO	LP07	15	1,450	3,650	4,038,775	3
Total		52.95	6,790	20,454	48,232,424	25

The need for the establishment of the local cooperation GM Network Center can be seen through its limitation of capacity and form of solid waste disposal. In other words, among 4 parties/actors, Koh Kha Tambon Municipality was the most competent LGO, Ta Pa TAO is the only LGO that owns a garbage truck and can perform waste collection by its own. Koh Kha Municipality owns 2 waste collection trucks. Ta Pa TAO owns 1 waste collection truck. Sala Tambon Municipality and Koh Kha TAO has no waste collection truck. Koh Kha TAO contracts out the private company to collect waste in its area as shown in below table.

Table F2 Garbage Information in Koh Kha, Lampang

Member LGOs	Waste Quantity per household (kg./household/day)	Number of waste collection truck(s)	Personnel for waste collection (person)	Method for waste collection in each member LGOs
Koh Kha Tambon Municipality	4.5	2	7	Collection by itself
Sala Tambon Municipality	4.8	-	-	Collecting performed by the communities
Ta Pa TAO	2.9	1	3	Collecting by itself
Koh Kha TAO	2.5	-	-	Contracting out the private company



Figure F3 The Garbage Area before the GM Network Center was Implemented

The establishment of the local cooperation GM Network Center aims to build capacity for solid waste disposal of the parties/actors by relying on integration of resource and skill personnel of solid waste disposal management of each party/actor. In this case, Koh Kha Tambon Municipality, which is the most competent LGO, plays the major role in promoting and supporting building capacity for solid waste disposal of each member, especially using its own landfill site for burying waste under the name of the GM Network Center. This generates direct benefits for the members.

For the method of resource integration for managing the duties under the name of the GM Network Center, it is performed by assigning each party/actor to give grant as administrative budget of the GM Network Center following agreeing rate based on budget capacity of each party/actor. Considering about the rate of supporting budget of the GM Network Center throughout 3 years, it is found that it tends to increase clearly. The supporting budget of the GM Network Center increases from 630,000 baht in FY2007 to 1,450,000 baht in FY2009. This tendency can reflect the recognition of the importance of and benefits that the parties/actors will receive from the performances of the GM Network Center. Another indicator that shows value of and advantage from the GM Network Center is that Wang Prow TAO needs to be a member of the GM Network Center. Wang Prow TAO is going to sign the MOU of the GM Network Center in the beginning of FY2009.

Table F3 The Supporting Budget for the GM Network Center

Member of LGOs	Supporting Budget of the GM Network Center 2007	Supporting Budget of the GM Network Center 2008	Supporting Budget of the GM Network Center 2009
Koh Kha Tambon Municipality	230,000	200,000	650,000
Sala Tambon Municipality	100,000	100,000	300,000
Ta Pa TAO	200,000	100,000	300,000
Koh Kha TAO	100,000	100,000	200,000
Total	630,000	500,000	1,450,000

The outcomes of the performances of the GM Network Center since it was established until the end of the second fiscal year (September 2008) can be seen through 3 activities: development of joint landfill site, solid waste disposal system development and promotion of participation from the people in the communities to perform solid waste disposal in the area together with the LGO.

1) Development of Joint Landfill Site

In the first year of the performances, the GM Network Center performed the development of the landfill sites in the area under the responsibility of Koh Kha Tambon Municipality. Formerly, those landfill sites were an open space and there was no appropriate management system for them. So, the GM Network Center administrative committee establishes the project on development of the landfill sites as the main project of FY2007. The outcome from the performances of the GM Network Center that can be seen at present is improvement of the landfill pit by building concrete fence in front of it, building a sentry box at the entrance, making public relations board for the projects of GM Network Center, improving the road inside the landfill site and building barb-wired fence on both sides of the road in the landfill site to prevent illegally waste discarding on the roadsides. Moreover, the GM

Network Center also cooperated with the scavengers to grow trees and improve panorama surrounding the landfill site, including improve the old landfill pit and perform landfill once a month.



Figure F4 Surrounding Area of Landfill Pit in Koh Kha



Figure F5 Front Area of Landfill Pit in Koh Kha



Figure F6 Inside Area of Landfill Pit

2) Solid Waste Disposal System Development

The outcome of the performances of the GM Network Center which are associated with solid waste disposal system development can be seen in many activities. The apparent outcome is introducing clearer form and method for solid waste disposal system in the areas of the members. Before the establishment of the GM Network center, solid waste disposal system of each member was not systematic. After the establishment of the GM Network Center, the members gradually lay down the more systematic solid waste disposal by dividing solid waste disposal into 4 forms: recyclable waste disposal system, garbage disposal system, hazardous or infectious waste disposal system and rubbish or general waste disposal system.

For recyclable waste disposal system, there is the establishment of “waste bank” in the village. The first waste bank established under the name of the GM Network Center is “Baan San Tor Waste Bank”, which is situated in Ta Pa TAO, Koh Kha Tambon Municipality gave grant to Ta Pa TAO to be expenses of the establishment and working capital for purchasing recyclable waste, making public relations about the performance of the waste bank in the villages in the areas of the members and receiving the waste bank members by allowing them holding shares of the waste bank. The price of the share of the waste bank is 10 baht per each. Each member of the waste bank cannot hold more than 10 shares.

The first success of the performances of the waste bank is that the people in the localities begin to change behavior of waste discarding. They sort recyclable waste into 5 kinds: steel, paper, glass, plastic and other remains such as candle remains and milk box, which can be processed into handiwork.



Figure F7 Household Recyclable Waste

The waste bank official open ceremony is done on September, 23 2006.



Figure F8 Baan San Tor Waste Bank Opening Ceremony by Member LGOs



Figure F9 Baan San Tor Waste Bank Opening Ceremony by Chairman of GM Network Center



Figure F10 Baan San Tor Waste Bank Opening Ceremony



Figure F11 Baan San Tor Waste Bank Activities

Another success is the parties/actors of the waste bank have more income from selling recyclable waste in each year. From the past performances, Baan San Tor Waste Bank has total profits for 51,019 baht as demonstrated in below table.

Table F4 Income of Ban San Tor Waste Bank from Selling Recyclable Waste

Income (Baht)		Expenditure (Baht)	
Grant for the establishment of the waste bank	10,000	Purchase of materials and durable articles used in the performances of the waste bank	7,990
Shares of 45 members Total 531 shares	5,310		
Deposits of the members (money from selling recyclable waste which is deposited at the waste bank)	12,083		
Profits from selling recyclable waste	51,019		
Total income	78,412	Total expenditure	7,990

Note: The waste bank has remaining money for $(78,412 - 7,990) = 70,422$ baht in total.

For garbage waste disposal system, the GM Network Center launches 3 activities related to it: fertilizing organic fertilizer from household garbage, making bio-fermented liquid from garbage and degrading garbage, such as food residues and

vegetable or fruit residues from the households or markets, by using earthworms. Fertilizing organic fertilizer from household garbage is performed via the campaign for giving knowledge about building a fertilizing pit in the household area for discarding garbage such as food residues. In this project, the GM Network Center distributes a cement pit to every household.



Figure F12 Fertilizing Organic Fertilizer from Household Garbage

For making bio-fermented liquid from garbage, the GM Network Center also performs it through the campaign for giving knowledge about making liquid organic fertilizer to the people in the localities by mixing garbage with microbe liquid and sugar residue in the fertilizing can. For degrading garbage by using earthworms, the GM Network Center performed this activity by making a contract with the private company to build a building for fostering earthworms to be used in producing earthworm excrement fertilizer. The private company invests in buying earthworm breed and the GM Network Center administrates the building for fostering earthworms. Garbage from households, such as food residues and vegetable or fruit residues, is used as the food of earthworms. So the GM Network Center receives the advantages from earthworm fostering both in terms of garbage disposal and benefits from the value of the processed products from the earthworm excrement.



Figure F13 Making Bio-Fermented Liquid from Garbage



Figure F14 Degrading Garbage by Using Earthworms



Figure F15 Fertilizer from Earthworms.



Figure F16 Products from Fertilizing Garbage by Earthworms



Figure F17 Organic Fertilizer Production

For hazardous garbage disposal system, the GM Network Center has established 1 point for hazardous waste collection in each community. The GM Network Center provides a large bin for containing hazardous waste, such as dry cell, battery and can of chemical substance, for every community. Moreover, the GM Network Center hires the private company to destroy hazardous waste by using the safe and correct process. For infectious waste, the hospital, which is the source of this kind of waste, will destroy it by itself.



Figure F18 Hazardous Garbage Bin Provided by Koh Kha Tambon Municipality

The rubbish or general waste disposal system is performed as waste sorting system in the household level through the campaign for giving knowledge about reducing the waste quantity in the household before discarding it at the waste collection point of the community. The first activity is sorting waste in the household into specific kinds; garbage will be discarded in the fertilizing pit and recyclable waste will be sold at the waste bank. For rubbish that cannot be processed or used, it will be buried at the landfill site. In addition, to cultivate the behavior of waste sorting into the mind the people, the GM Network Center encourages them to buy the garbage bags instead of paying service charge for waste collection. This is another innovation method for reducing the waste quantity, which is implemented in Koh Kha TAO.

The past performances of the GM Network Center can help in reducing the waste quantity in the areas of the members effectively. The waste quantity in Koh Kha Tambon Municipality is reduced from 10 tons a day into 5.62 tons a day. The waste quantity of Sala Tambon Municipality is reduced from 5 tons a day into 0.54 tons a day. The waste quantity in Ta Pa TAO is reduced from 7 tons a day into 1.4 tons a day. And the waste quantity in Ko Kha TAO is reduced from 3 tons a day into 0.0436 tons a day. In other words, the total waste quantity in the areas of the members

is reduced from 25 tons a day into 7.6 tons a day. The ratio of the reduced waste quantity is 71.85% as demonstrated in the following table.

Table F5 Total Waste Quantity of each LGO in Koh Kha, Lampang

Member LGOs	Waste Quantity before the Performances (kg./household/day)	Waste Quantity after the Performances (kg./household/day)	Total Waste Quantity in the Area (Ton/day)
Koh Kha Tambon Municipality	20	2.5	5.62
Sala Tambon Municipality	5	1.06	0.54
Ta Pa TAO	7	0.31	1.4
Koh Kha TAO	3.0	0.03	0.04
Approximately	3.82	1.26	7.6

3) Promoting of Participation for Solid Waste Disposal from the local residents

Besides the aforementioned campaigns and activities, the GM Network Center also promotes participation for solid waste disposal from the people in the communities by allowing them participating in the activities of environmental development under the responsibility of each LGO, for example, the competition to find the village that has the best solid waste disposal, the project on environmental protection volunteer, the project on promoting the use of basket and cloth bag, the project on biological agriculture and fermentation of garbage waste disposal can generate Methane gas, which can be used as fuel for cooking. For these activities, the GM Network Center is the main mechanism for integrating cooperation among the communities, temples, schools and governmental and private organizations and agencies.

Anyway, the GM Network Center's performances cannot be fully driven following the performance plans because of the problems of budget, i.e. most of the GM Network Center's past performances need moderate budget for performing such as building the fence surrounding landfill pits, training garbage collectors and making brochure for campaigning about sorting waste in the households and establishing village civil society in 4 villages within the areas of the members once a month, including making cut-out boards for publicizing the GM Network Center's performances, whereas the big project such as building hygienic burying pit (as instructed by Assoc. Prof. Dr. Tawee Chaisompob), requires large budget (about 1 million baht), but the GM Network Center has the budget only about 630,000 baht. For this reason, the GM Network Center cannot perform the performances that require the budget more than capability of the GM Network Center.



Figure F19 Using Basket to Shop Instead of Plastic Bag.



Figure F20 Recyclable Products.



Figure F21 Recycle Paper



Figure F22 Methane Gas can be used for Boiling Water.



Figure F23 Melamine Glass were used Instead of Plastic Glass



Figure F24 Waste Offering Project



Figure F25 Oil Trapping Tank Project



Figure F26 Yo-Kun-Mea-Num-Wong River Quality Improvement Project.



Figure F27 Training for Volunteer in Environmental Protection



Figure F28 Training for Waste Collectors

BIOGRAPHY

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