

PN - ABM-110

ISN 79015

RESEARCH TRIANGLE INSTITUTE

**Municipal
Management
Assessment**

Bangkok

July 1987

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Management
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Prepared for
The Office of Housing and Urban Programs
U.S. Agency for International Development

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ACKNOWLEDGMENTS

The Municipal Management Assessment of the Bangkok Metropolitan Administration was conducted by a team from the Research Triangle Institute under Indefinite Quantity Contract PDC-0000-I-00-61-69-00 with the Office of Housing and Urban Programs of the United States Agency for International Development.

Officials of the Bangkok Metropolitan Administration were extremely generous with their time and information, without which the study could never have been undertaken. In that regard, we are extremely grateful to Deputy Governor Khun Hansa Kaewbandit who was instrumental in providing access to BMA officials and relevant documentary material. Our appreciation is extended to the many BMA officials in the Departments and District Offices.

Finally, we would like to thank Miss Suganya Boonprasirt and Mr. Tassanapong Chakkapark who worked closely with the assessment team as valuable sources of information about the organization and operation of the BMA and assisted the team with interpretation.

The results presented in the following document are the responsibility solely of the authors and do not represent the official position of the Bangkok Metropolitan Administration or the United States Agency for International Development.

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CHAPTER I: EXECUTIVE SUMMARY

The Office of Housing and Urban Programs of the United States Agency for International Development is involved in the process of identifying ways to improve the management of local government. To assist this effort, a team of municipal finance and public management specialists from the Research Triangle Institute completed an assessment of the financial management and public service delivery responsibilities of the Bangkok Metropolitan Administration (BMA). The assessment centered on three major issues of immediate concern to the BMA management:

- The adequacy and performance of the BMA's revenue generation;
- The adequacy of financial management systems, especially the systems for monitoring revenues, expenditures and the performance of service delivery functions; and
- The overall organization structure of the BMA.

The study team relied upon a variety of information sources including interviews with Royal Thai Government (RTG) officials and BMA Department and District officials, budgetary and service delivery data and reports, previously prepared studies, and observations of service delivery operations.

There are two main audiences for this report:

- BMA top management, especially the Office of the Deputy Governor for Finance and Administration; and
- USAID.

The recommendations are intended both to assist the BMA in the implementation of its policies and programs and to help USAID identify potential areas in which it can support the RTG's decentralization policies and the BMA's program to strengthen its administrative and financial capabilities.

The study has been conducted within the context of two major national policy issues:

- The mix of service provision responsibilities between the RTG and the BMA; and
- The resource base for financing services within the Bangkok metropolitan region.

Under any foreseeable circumstances, there will be considerable overlap between the RTG and the BMA in the provision and financing of urban services. The ability of the BMA to play an

expanded role over the course of the RTG's Sixth National Development Plan and its own Third Development plan will depend on two key factors:

- The extent to which the BMA can improve the efficiency of its revenue collection and service delivery responsibilities; and
- The extent to which RTG agencies and ministries can resist exercising control in those areas of policy and program in which agreement is reached for either exclusive or greater BMA responsibility.

The BMA faces two problems in expanding its own sources of revenue. Central government legislation and the central government administration of major shared taxes and surcharges affect the efficiency of economic activity in the metropolitan region in ways that cannot be affected by the BMA. In addition, the BMA's administration of the revenue sources under its own control at present is inefficient. Both the value of the house and rent tax base is set too low, which is determined by the BMA, and the collection is incomplete. If these two problems are addressed by the BMA, significant -- as much as 20% increases -- additional revenue will be available to finance investment. However, to achieve still additional improvements, the RTG must consider reform of some of the provisions of tax laws affecting municipalities.

To insure that its present and potentially greater future revenues are used to achieve the highest possible level of services, the BMA recognizes the importance of completing the implementation of the Planning, Programming, Budgeting System. This will require developing a uniform classification and coding system for all expenditures that will reduce the number of line item expenditures to a small set of object of expenditure codes and integrating those categories into the PPB System. This classification and coding process should be carried out with the accounting system in order that the budgeting and accounting systems will operate on the same basis. A complementary step should be the development of a comprehensive system of measuring the performance of services delivery and utilizing that as a management tool to evaluate routine expenditures.

The variety of services provided by the BMA cover all facets of economic and social life in the city ranging from capital intensive infrastructure provision to educational, medical and recreational services. Managers of virtually every service area express concern for how their services can be improved. Many officials have developed various systems for collecting management-related information and analyzing it to evaluate their performance. However, there seems to be no overall emphasis on this type of management approach and no coordinated approach across all BMA Departments and Districts.

The BMA's organizational structure has evolved over time to meet its unique roles. This structure is not under the direct control of the BMA, requiring RTG approval to make even relatively minor rearrangements of responsibility and authority. There are some opportunities for combining similar functions that presently are widely separated, and there is a need for clarifying the mix of responsibilities between Departments and Districts. However, no major review of structure is suggested at this time because of the severe constraints on the BMA to make any significant changes.

CHAPTER II. PURPOSE OF THE STUDY

The Office of Housing and Urban Programs of the United States Agency for International Development (USAID) is engaged in a variety of efforts to improve local government management in developing countries around the world. These efforts are intended to improve the delivery of services to the poor and to create an environment more conducive to the development of local private enterprises.

As one of these efforts, a team of municipal finance and management specialists from the Research Triangle Institute conducted an assessment of the financial, management and service delivery responsibilities and procedures of the Bangkok Metropolitan Administration (BMA). The assessment focused on three major issues of immediate concern to the BMA management:

1. The performance and adequacy of the BMA's local revenue generation.
2. The adequacy of financial management systems for revenue and expenditure planning and accounting and management of service delivery performance.
3. The overall structure of the BMA.

These are key issues in the administration of the BMA because of the Royal Thai Government's (RTG) policies to control expenditures of the central government, including transfers and subsidies to the BMA, and to transfer greater service responsibility from the national to local governments.

To study these issues, the full range of service delivery and administrative responsibilities of the BMA was examined as well as the BMA's financial management and support systems. Based on interviews with key BMA officials and review of basic budgetary data, and secondary data and reports, the adequacy of the BMA management support systems (including planning, budgeting, accounting and personnel), the effectiveness of its organizational structure and its staff capabilities were reviewed.

This report contains the results of the study. It includes in the next chapter a discussion of the relative roles and responsibilities of the central government and the BMA. Chapter IV contains a more detailed description and analysis of the BMA's service responsibilities, organizational structure, financial condition and management support systems. Chapter V describes the specific services provided by BMA. Finally, Chapter VI provides conclusions and recommendations for both the BMA and USAID, which provided the financial support for the study. There are two audiences for this report--the top management of the BMA, and specifically the Office of the Deputy Governor for Finance and Administration, and USAID. It contains, therefore,

descriptive information known to BMA officials but not necessarily to USAID. Similarly, recommendations are provided both to assist the BMA in its management and administration and to USAID to identify areas in which it can support the Royal Thai Government's decentralization policies and the BMA's program of administrative and financial strengthening.

There have been many studies related to the Bangkok metropolis. More often these have been concerned with specific technical issues, particularly in the areas of flood and drainage control and infrastructure planning and finance. In particular, the NESDB study, Bangkok Metropolitan Regional Development Proposals, provides a thorough description of specific projects and proposals for ways to finance infrastructure. Other feasibility and planning studies from a host of foreign assistance agencies and programs also are available which detail specific technical issues, problems, and potential solutions. Such reports have been reviewed (see Annex 1) and relevant information used to inform this assessment.

CHAPTER III: NATIONAL POLICY CONTEXT

It is hard to exaggerate the importance of the Bangkok Metropolitan Region (BMR) to Thailand's economy. More than half of the nation's gross domestic product is produced in the metropolitan region; more than fifteen percent of the country's population resides in the metropolitan area; and almost half of the country's urban population lives in the metropolitan area. Of this concentration of population and economic activity, more than seventy percent of it is within the jurisdiction of the Bangkok Metropolitan Administration. Although it may be a slight exaggeration, the statement is heard frequently that Bangkok is Thailand.

Given its prominence as a population and economic center, it is unrealistic to expect anything other than a close interaction between agencies and ministries of the RTG and the departments and districts of the BMA. The degree of overlap between the two levels of government and the degree of supervision, control and review of the central over the local level undoubtedly will remain high. It is within that overriding interconnectedness between the two that the BMA must seek its own level of autonomy and control. Growing indebtedness at the RTG level and decisions to increase the responsibility both for providing and financing services at the local level make the present a critical time for clarifying the role of the BMA and strengthening its financial and administrative capacity.

RTG policy in previous five-year development plans was to stem the flow of population to the BMR by attempting to stimulate other centers of growth. In the Sixth Five-Year Plan, it has been acknowledged that this approach of trying to attract population to other urban centers was mainly unsuccessful (Phisit, 1987). RTG policy in the present five-year plan is to increase the efficiency of economic and administrative life in the BMR and to approach full cost recovery for services provided within the metropolitan area. Full cost recovery is to be achieved through a variety of direct user or beneficiary charges, such as are being considered now for flood control, and a general decline in the amount of RTG subsidies for BMA provided services. The effect of the former policy will be to cause the cost of services in BMR to fall more directly on the users of services, thus forcing users to make more economically sensitive decisions about location in the metropolitan region. The effect of the latter policy will be to reduce the present rural subsidy, currently estimated at twenty percent net (that is, twenty percent of the cost of all services in the metropolitan area, including both central and local government-provided services, is a net transfer from the rural to urban sector). As a result of this shift in national policy, the BMA will play an increasingly vital role in increasing the efficiency of the metropolitan region, and will face increasing demands on its administrative and financial capacities.

This chapter considers two themes in that national policy context:

- The mix of service provision responsibilities between RTG and BMA;
- The resource base for financing services.

A. RESPONSIBILITY FOR SERVICE PROVISION

Urban services within the metropolitan region are provided in three ways:

- State enterprises and national agencies that are all, or partially, self-financed through user charges;
- Central ministries or agencies that share service responsibility with the BMA with overlapping functions; and
- BMA departments and districts that are responsible for providing most or all of some services.

Central agencies or state enterprises provide most of the basic utility services within BMA's jurisdiction, including telephone, electricity and water. All three utilities enjoy a reputation for good service, quality and coverage. Much of Bangkok's attractiveness as an international economic center is due to the availability and excellence of the basic utilities. There are 700,000 telephones in the metropolitan area, and long-distance and international connections are excellent and rapid. Electricity service is reliable and coverage extends to over one million households. Water services reach sixty percent of the metropolitan region's population and nearer 65% in the BMA proper, with virtually all of it household connections except in the informal squatter settlements and the outlying suburbs of the region. The state enterprises providing basic utility services currently show a net loss with operating and non-operating expenditures about 115% of revenues. In addition to the basic utilities, the RTG through the Bangkok Metropolitan Transit Authority provides mass transit through an extensive bus system. This is augmented by RTG-regulated private minibuses and taxis.

The second category of services include those for which central government and the BMA share overlapping responsibilities including critical infrastructure-related or capital intensive services:

- Streets (and traffic control);
- Drainage and flood control; and
- Health.

Transportation (streets, mass transit and traffic control), along with flood control and expansion of the water system are the three priority areas for infrastructure investment in the Sixth National Development Plan of the RTG and the Third Development Plan of the BMA (for the BMA, transportation and flood control, not water). Data provided for the BMR Study show that during the 1982 through 1986 period, 80% of the cost in infrastructure investments in roads and bridges (6,900 million Baht) came from the RTG, with local government (virtually all BMA) providing the remaining 20% (1,700 million Baht). Added to non-toll roads and bridges was an additional 2,800 million Baht in expressway investment, almost all in the state enterprise expressway authority. An additional 84 million Baht in traffic management infrastructure, all from the RTG, completes the investment expenditure picture for non-rail transport.

Flood protection and drainage shows a much heavier involvement for the municipal governments with almost 51% of the 2,200 million Baht investment coming from municipal governments (almost all from the BMA, although the data are aggregated for all municipal governments in the BMR).

Finally, up to the present the RTG has been responsible for one hundred percent of the investment in housing (almost 3,000 million Baht from 1982 through 1986, split approximately one-third-two-thirds between ministries and the National Housing Authority, respectively). However, in the sixth national development plan, responsibility for public housing will be a shared responsibility.

The remaining urban services are provided almost exclusively by the BMA, including:

- Garbage collection and disposal;
- Night soil collection and disposal;
- Street cleaning and other cleansing of public areas;
- Canal clearing, maintenance and other drainage;
- Recreation and a variety of social services;
- Primary education (grades 1 through 6 compulsory school);
- Land use regulation and control;
- Building construction control and regulation;
- Low income health services (significant mix with central government).

Investment expenditures can be used to show the extent of central government provision of infrastructure related services with BMA and other local governments in the metropolitan area carrying 12% of the burden, state enterprises 40% of the burden, and central ministries and agencies 48% of the burden. If, however, one considered the state enterprises as at least potentially self-financing through user or beneficiary charges, a not entirely unreasonable possibility except perhaps for low-income housing, then the remaining infrastructure related services would be split closer to 30% local, 70% national with almost all of the national concentrated in roads and bridges (figures derived from BMR study by subtracting all investments in areas dominated by state enterprises from the total, except for housing, before computing percentages). From this perspective, in those areas of infrastructure investment which have not heretofore been considered at least partially self-financing, the BMA's role has been greater than sometimes considered, and in the future as expressed in the Sixth National Development Plan, that role will continue to expand.

The increasing importance of the BMA role is both a problem and an opportunity for the RTG and the BMA. While the central government has recognized the necessity, due to its own fiscal constraints, of shifting greater responsibility to the BMA, it is not unusual for central government officials to express reservations about the ability of the BMA to absorb this greater responsibility and about the adequacy with which urban services will be carried out. This anxiety is not surprising given the importance of Bangkok in the national economy. More than one person has commented that the problems of Bangkok are "too important to be left to local government." The reality, however, is that both financially and rhetorically the RTG has embarked on a shift toward a greater role for the BMA and a lesser role for itself. What will evolve over the period of the Sixth Development Plan (Third BMA Plan) will depend mainly on two factors:

- The extent to which BMA manages both its service provision and revenue collection responsibilities with increasing efficiency; and
- The extent to which RTG agencies and ministries can resist intervening in those areas in which agreement is reached for either greater or exclusive BMA responsibility.

B. RESOURCE BASE FOR BMA SERVICE PROVISION

The BMA has a variety of tax and non-tax resources available to it to meet its financial responsibilities. Detailed analysis of these revenue sources and the implications for BMA's financial condition is reserved for Chapter IV, Section C. Here the emphasis is on the overall structure and the mix between central and local revenues.

In general, direct local taxes available to the BMA, and all other municipal governments in Thailand, are not very robust, nor do they respond very rapidly to growth in the economy. In addition, the BMA has not responded itself to increasing the tax base where possible (e.g., the house and rent tax) to match changing economic conditions.

In general, as noted above, a significant amount of "local type" services such as the basic utilities and a majority portion of infrastructure investment are the responsibility of, and are therefore financed by, central government either through the ministries or state enterprises. BMA financial resources include three types of taxes:

- Local direct taxes (about 20% of taxes);
- Taxes shared with the RTG (about 25% of taxes); and
- Surcharge taxes on top of central taxes (about 55%).

Non-tax revenues include various fines, fees and permits which are only about two to three percent as large as taxes; revenues from properties which are about nine percent as large as taxes; and commercial operations which are less than 1% the amount of revenues from taxes.

In addition to these direct sources of BMA-generated revenues, some activities of the BMA receive direct central government grants-in-aid. In recent years, the BMA budget has been supplemented by grants-in-aid of thirteen to eighteen percent over the above direct revenue sources. In the budget being planned for 1988, BMA revenue sources are expected to be just over eighty-three percent of total revenues (Bangkok Post, July 11, 1987, p. 3).

Overall, the BMA resource base is tightly controlled by the RTG. For the direct taxes that are BMA's, the rates are controlled by central government, although BMA is able to establish the value of the tax base for the house and rent tax. The shared taxes are controlled by central government with BMA's share thus depending on the adequacy of central collections. For example, the vehicle tax, the second largest single tax revenue for BMA, is administered by central government, as are all the surcharge taxes. In the latter category is the business tax surcharge which accounts for the largest single source of BMA revenue. No observation at all was made during this study of the efficiency of central government tax collection, but it is important to observe here that under the existing tax structure, BMA's "tax collection efficiency" is dictated mainly by the central government's tax collection efficiency. That is, in viewing the overall efficiency of revenue generation for urban services, under present circumstances, the question of efficiency as it

will affect total revenue generation is largely out of BMA's hands, although that does not excuse significant efforts on BMA's part as will be discussed in subsequent chapters.

Without significant restructuring of local tax resources, the most significant source of additional revenues to the BMA to meet its growing responsibilities will be user or beneficiary charges. The BMA already has the legal authority to charge consumers or beneficiaries of services for the value of the service. This authority is used presently for garbage collection, nightsoil transfer and a variety of licenses or fees to cover the costs of control or regulatory activities such as the building construction control fees.

For both the BMA and central government, it is planned that such user charges will increase in use. At the present, the BMA and the RTG are cooperating in a survey to determine if the population in the most floodprone areas are willing to pay the costs of increased flood protection. The policy of the BMA is to provide that flood protection regardless of the outcome of the survey, but if user charges are not possible, it will be done over a number of years with whatever funds are available from other BMA sources.

In addition to increased use of beneficiary or user charges, the BMA has other possibilities for expanding its resource base. Most individuals in the BMA acknowledge that the present use of existing taxes is considerably below the legal possibilities. While estimates vary, more than one individual provided the estimate of 1,000 million Baht as the additional amount that BMA could collect of its own taxes through better administration and more adequate assessment of rental values to establish a more reasonable base. Specific taxes and other revenues are discussed in more detail in Chapter IV.

CHAPTER IV. MUNICIPAL MANAGEMENT AND FINANCE

A. INTRODUCTION

The BMA's management and finance of its service provision responsibilities involves the activities of 39,000 officials, full-time and part-time employees. These 39,000 individuals work in a variety of central level departments which perform staff functions and a mix of line responsibilities and twenty-four districts which are the closest level of citizen contact.

Managing and financing these responsibilities involves extensive capital projects investments and a large routine or operating budget and extensive interaction with the RTG. Management support functions for planning, budgeting, accounting and personnel are oriented toward technical management methods, but are only at early stages in developing the necessary information bases and decision processes. Each of these themes is developed in separate sections of this chapter covering:

- Organization structure;
- Financial condition;
- Intergovernmental relations; and
- Management support systems.

B. BANGKOK METROPOLITAN ADMINISTRATION: ORGANIZATIONAL STRUCTURE

The merger of the Bangkok and Thonburi municipalities in 1972 led to the formation of the Bangkok Metropolitan Administration (BMA). Since that time the BMA's organization and jurisdiction have changed through various legal acts and amendments, until August 31, 1985, when regulations included in the "Act Regulating the Administration of the Bangkok Metropolis, 1985" established the current organization. Annex 2 includes a BMA organization chart which shows the administrative structure in terms of the levels of authority and service categories.

The BMA is, by any comparison, a very large and complex public bureaucracy. Its 39,500 public servants serve a population of 6.2 million people, who are spread over an administrative area of about 1600 square kilometers. To fulfill its responsibilities, it is organized into an administrative hierarchy comprised of six levels of authority: Office of the Governor, and the BMA General Assembly; 12 Departments; 48 divisions and 2 sub-divisions, which are further sub-divided into four or more sections each. As paraphrased from several of the interviews, these five levels of the BMA are responsible for:

- planning policies;

- developing programs to carry out policy directives;
- authorizing budgets and other resources to implement programs;
- monitoring programs to ensure their compliance with policy directives; and
- assessing the extent to which policy directives are met.

The next BMA organizational level includes the 24 BMA districts, grouped into what is referred to as the "inner city" of 13 districts and the "outer city" of 11 districts. Each district is administered by a District Director, one to two Deputy Directors appointed by the director, and 8 service sections:

- local administration;
- census;
- revenue;
- education;
- finance;
- cleansing;
- public health; and
- public works.

The District Director is appointed by the Permanent Secretary of the BMA, with the approval of the Governor. Each district also has a District Council, whose members run district-wide and serve for a four year term. In contrast to the five BMA administrative levels discussed above, the general impression of the role of the districts gained from interviews and observation is that they provide a means for:

- identifying service needs within the BMA;
- communicating information about those needs to appropriate BMA departments;
- monitoring citizen reactions to BMA policies and service delivery; and
- implementing BMA policy directives through specific program activities, such as repairing potholes or providing disease prevention counselling.

There currently is a proposal to increase the number of districts from 24 to 36 by subdividing some of the most densely populated districts in the "inner city". This proposal, intended to increase the direct contact with citizens, requires the approval of the RTG to change the basic BMA legislation.

Several other government functions are performed at the district level: income tax collection, under the authority of the Ministry of Finance of the central government; military recruitment for the national army; and agricultural promotion, conducted for the central government, Ministry of Agriculture. There are also general registration functions performed, such as for births, deaths, and marriages.

Examination of the organization chart, as well as interviews with BMA officials, gives the impression of a strictly hierarchical structure. Since many of the Departments carry out parallel functions to the Districts, differentiated mainly by the size of the problem (e.g., drains on streets with names--Department; and on streets without names--District), close coordination is required. However, little close coordination seems to occur between departments and the district offices. District offices submit detailed project plans to the BMA departments, and receive general policy guidelines from the BMA departments to carry out these plans. But, district offices appear to interact very little with the BMA departments once their budget is approved by the budget division (Office of the Permanent Secretary). The Office of Inspector General has oversight responsibility for service delivery at the district level. In the case of a dispute between a BMA Department and a District Office (or among departments), the matter would be taken to the appropriate Deputy Governor who would then probably appoint a committee of officials from the offices involved to meet and attempt to resolve the issue.

Analysis of the BMA as an organization has to recognize the role Major General Chamlong Srimuang, the first elected Governor of the BMA. He won a four year term of office in 1985 as an independent candidate and has quickly established himself as a powerful political official.

In numerous interviews with BMA personnel, as well as in informal conversations with Bangkok residents, a clear impression received is that the Governor has had a significant, positive impact on the character and mood of the city. For many, he seems to have instilled in them a belief that Bangkok city government will not be associated with corruption and inefficiency, but rather that (through him) it cares about the people of the city and is trying to do something to improve their lives.

Several people interviewed, while expressing strong support for the Governor, also expressed concern that support for his administration may reflect support for the man, instead of

support for longer term change in the administrative practices of the BMA, changes aimed at improving the efficiency and effectiveness of BMA service delivery.

Working closely with Governor Chamlong is a 12 to 15 person policy advisory group, and four Deputy-Governors personally selected by him for his administration. The Deputy-Governors carry out the policies of the Governor, and serve as his link to the BMA departments; each Deputy-Governor is responsible for several departments, such as social services, welfare, and education; public works, sewage and drainage, and public cleansing; and so forth. Interviews with department officials verified the importance of the Deputy-Governors, both as communication links to the Governor, and as major actors in the policy development process. Several department staff interviewed, for example, noted the absolute necessity of securing a Deputy Governor's approval for a project, especially if there was any question as to whether or not the project conformed to the guidelines set forth in the BMA Third Development Plan. If the Deputy Governor disapproves of the project, then it is highly improbable that the project will be approved by the Governor.

The Governor shares power with the BMA Assembly, each of whom is elected city-wide for four year terms of office. The relationship between the Governor and the Assembly is complicated by the fact that central government's Ministry of the Interior has the authority to resolve disputes between the Governor and the Assembly, and in the case of an unresolvable difference, can either remove the Governor, dissolve the Assembly, or both. As one observer has noted, this potentially controlling role of the Ministry of Interior has contributed to a certain amount of ambiguity as to who is in charge of local government in Bangkok.

This example of the power of the Ministry of the Interior underscores two key points regarding the organization of the BMA. First, the concept of the BMA, much less its present organizational structure, is very new. Several of the people interviewed referred to the present BMA organization, especially the popular election of Governor, as an "experiment ... that may or may not work." Therefore, it is too early to assess fully the impact of the experiment on the operation of the BMA. It is not too early, however, to recognize the opportunities now for positive development of the BMA, which has a new five year plan and a new administration that has the strong support of the citizens of Bangkok for efficient and effective local government.

Also, any analysis of the BMA as an organization has to recognize the legal as well as practical authority of the RTG to control the operation of city government in Bangkok. One division director referred to Bangkok as an "occupied territory", an obvious reference to the pervasive influence of the central government. This means that any consideration of ways to enhance the BMA's administrative capacity has to take into account the

central government hegemony over the operation of the BMA. This pervasive influence carries over to the BMA's financial structure, reviewed in the next section.

C. FINANCIAL CONDITION OF THE BMA

This section reviews the financial condition of the BMA by evaluating its revenue base, the prospects for growth in that revenue base, and the possibilities for increasing the BMA's capacity to finance additional infrastructure and other capital investments. The first subsection includes an analysis of the BMA's specific revenue sources and the possibilities for expansion. This is followed by an analysis of BMA expenditures focusing on the functional distribution of expenditures. The third section then assesses the overall financial condition by projecting BMA revenues and expenditures to the year 2000 using a varying set of revenue and expenditure assumptions to produce six alternative scenarios. The discussion concludes with the possibilities for the BMA leveraging its financial capacity to increase the rate of capital investment.

1. REVENUE BASE

BMA revenues are classified as regular and special with the former referring to various locally raised revenues plus shares in nationally-collected taxes. Special revenues refer to grants-in-aid or direct subsidies for specific purposes from the national government. As noted in earlier chapters, it is the specific policy of the RTG expressed in the Sixth Development Plan to decrease the central support of the BMA (and other municipalities), at least in the direct subsidy category if not in some of the shares of taxes collected centrally. This policy is already manifest in recent years. In 1984, the BMA regular revenues were 75% with the remaining 25% of total revenues coming in the form of direct subsidies. Direct subsidies increased to almost 30% in 1985, then fell to 18% in 1986. For 1988, the BMA projects the central subsidy to remain at its recent lower levels with the BMA expected to generate through regular sources 83% of total revenues.

Annex 3 provides a detailed list of BMA revenues for 1984 through 1986 showing for each revenue item its actual value in thousands of Baht, the annual growth rates in each item, and the proportion of total revenues represented by each item. Of total revenues, all tax sources average about 65% with other non-tax and central subsidies supplying the remaining 35%. Taxes collected by BMA and taxes shared with the RTG are about equal in portion, from 16% to 17%. The largest tax source, however, are the surcharge taxes which are local governments' allowed surcharge on top of central taxes. Surcharge taxes are just over 35% of total revenues.

For BMA direct taxes, the house and rent tax is the dominant source accounting for almost all of the local direct taxes. The land development tax, the signboard tax and the animal slaughter tax do not reach 3% of total revenues compared with over 13% of total attributable to the house and rent tax. At present the house and rent tax, although the most important local direct tax, is extremely inefficient as a revenue source. The tax rate is set by the RTG, but the BMA is free to value the base. The centrally-determined rate is applied to the rental value of each developed property. The major problem with the tax is the exemption, by national law, of owner-occupied buildings. The BMA estimates that 60% of the properties with buildings in the municipality are owner-occupied and thus exempt from the tax. When buildings owned by the governments, religious, and other tax-exempt organizations are considered, perhaps as low as 15% of the developed properties in Bangkok are liable to the house and rent tax. The owner-occupied exemption is a serious deficiency in that it restricts the tax to a small base denying to municipalities a tax source that is responsive to the value increases in property due to the provision of municipal services. Thus, 60% of the privately-developed properties in the BMA have their value enhanced by services provided by both the BMA and central government, but do not pay any direct tax reflecting that value.

In addition to seriously reducing the economic efficiency of the tax, the exemption also causes an inequitable distribution of the tax burden. The only payers of the tax are businesses which do not contain the owner's residence and rental property. The latter is passed on to the renter. Thus, the middle and upper income residents mainly escape the effects of the tax while lower income renters and commercial properties bear the burden.

Even with these problems caused by the structure of the tax, the BMA also could considerably improve its capacity to collect on the tax. One estimate which was corroborated by BMA officials is that Bangkok has the lowest tax base--that is, the BMA sets the lowest rental value for the various categories of property--of any municipality in the country. In addition, BMA officials were not at all reluctant to acknowledge that there is serious undercollection even for what are defined as tax liabilities.

Under collection exists for two main reasons. Inadequate record-keeping prevents tax administrators from having sufficient information on who is liable, who has paid, and who has not. In addition, there are generally acknowledged abuses in allowing some taxpayers to escape payment or to pay less than their liability. Some of these abuses may simply be favors to individuals; some feel that other abuses are the result of under-the-table payments. Even without changes in the legislative structure of the tax, reasonably conservative estimates by the BMA itself (and others in the RTG) suggest that the BMA by the application of a thorough listing of taxpayers,

regular updating of records, and central control of tax administrators would yield an additional 1,000 million Baht per year, a greater than 15% increase in total BMA revenues.

To achieve this revenue increase, the most likely improvements would be to automate the tax base with simple database management, capable of being implemented on inexpensive microcomputers, and more rigorous central control. The latter could be implemented by making tax administrators employees of the Department of Finance rather than of Districts with regular rotation of tax administrators to different Districts to prevent their becoming locked into a local, informal system.

The other relatively significant local direct tax available to the BMA is the land development tax. Collections are much better on this tax because records already are automated, and they are kept reasonably up-to-date. The tax is structured to encourage development with undeveloped land paying the highest taxes, taking into account use. The amount generated by the tax is presently lower than it should be because, although the BMA is officially entitled to set the rates, the RTG has frozen the rates for the last ten years, refusing BMA proposed changes. Evidence that the tax operates as it is structured, although with lower yields because of the frozen rates, is observed in those districts which have virtually no open land for further development. In those districts, as the land has been developed and the land development tax paid, its revenues have dropped, while the house and rent tax has increased where the development has been non-owner occupied commercial property.

Shared taxes, of which the vehicle tax is the only significant one for the BMA, are about equal to local direct taxes. The RTG collects taxes on vehicles, and shares this collection with municipalities. This tax is relatively evenly distributed among municipalities, but the densely populated urban areas, notably the BMA, suffer because the tax is uniform across the country. Thus, the largest number of drivers in the country, which create enormous pressure on BMA roads and traffic control, pay no more than drivers in other parts of the country. In addition, no consideration is given for the weight of the vehicle which would account for some of the variable impact on roads. Proposals are now being considered by the RTG to change to some type of weight-based vehicle tax.

As noted above, the surcharge taxes are imposed on top of centrally-collected taxes on business activities, gambling operations, liquor and beverage sales, and excise taxes. These taxes are more or less similar to sales or value added taxes shared with local governments in many other countries. For Bangkok, the national administration of the surcharge taxes is discriminatory according to BMA officials. They estimate that 80% of the business activity is in the BMA, but only 68% of the revenues are distributed to the BMA. RTG officials counter that

the picture must be examined as a whole; the BMA receives a far larger share of subsidies and direct central government provision of services than other municipalities.

Two other revenue sources are important now, and potentially even more important to the future of BMA. First is various income from municipal property, other assets and limited commercial activities of the BMA. Presently these sources account for nearly 10% of total revenues, but their potential is greater. The BMA is a large land owner, and at least some of it is occupied by squatter settlements who have no clear title and who pay no taxes; nor have they purchased the land from BMA. Estimates are difficult, but USAID/RHUDO who has been working with the National Housing Authority (NHA) in some of the areas and RTG officials estimate that in some slums a majority of slum residents are above the poverty level. Their most serious barrier is not economic but the lack of security of clear title to their dwellings. Although it is impossible to estimate the total potential income to the BMA from identifying occupied property and offering to sell it for clear title, it is evident that considerable one-time income could be derived. The land information system study being conducted by the Department of Policy and Planning will contribute significantly to better management of the BMA's land assets as it develops a complete registry.

The other significant future source is user or beneficiary charges. The BMA presently utilizes fees for garbage and night soil collection and disposal as well as rental fees for markets and various other municipally-provided services. The BMA does not view these as business operations. Indeed, the fees charged are less than the costs of service because garbage collection and night soil transfer are two critical elements in the Governor's program to keep Bangkok clean. While there are sound rationales for either cross subsidizing such services as garbage collection with other revenue sources or setting differential rates based on ability to pay within the service, it is somewhat difficult at present for the BMA to decide overtly on the degree of subsidy and the source of subsidization because of weaknesses in the classification system for budgeting and accounting, discussed in a subsequent section.

That user or beneficiary charges will be a significant source of revenue to pay for capital investments in the future has been made clear by the Governor. Cooperating with the RTG, the BMA will conduct a survey in the next months to determine willingness to pay for flood control. While the BMA is committed to improving flood control regardless of the outcome of the survey, it is expected that if not in the initial survey, then after severe flooding occurs again, there will be a heightened willingness to pay.

Of all the revenue options open to the BMA, serious use of the present house and land tax, even with its centrally-imposed limitations, and user or beneficiary charges are the preferred mechanisms for increasing revenues. This is not to discount the better management of municipal assets such as land, but the failure to utilize the house and rent tax to its capacity and to utilize beneficiary charges could distort private sector economic investment in Bangkok as well as leave residents with less than possible infrastructure services.

Specifically, the underutilization of the present house and rent tax is inequitable, as discussed above. In addition, if beneficiary charges are levied on properties according to the value increased due to such services as flood protection, then even some of the structural inadequacies of the house and rent tax will be lessened. That is, beneficiary charges will have the effect of making investment in property more expensive in direct proportion to the value of the property and the value of municipal services provided to property. Applying such charges then will allow private investment decisions that are more reflective of the true costs, especially if the exemptions to the House and Rent Tax are not carried to the Flood Protection Tax.

2. BMA EXPENDITURES

By law, the BMA cannot incur an annual deficit. Typically, a revenue carryover at the end of the year is achieved, in amounts varying from 50 million Baht to 100 million Baht in 1984 through 1986. This carryover is not just a result of underestimating revenues or overestimating expenditures. It is a deliberate policy to accumulate funds for capital investment. It also is true, however, that revenue estimates typically are lower than achieved, and expenditures are tightly controlled to allow for adjustments if a shortfall begins to appear possible during the fiscal year. Finally, capital projects typically fall behind schedule due to delays in bidding, in acquiring rights of way, or other factors, so that some excess of revenues over expenditures occurs every year. To the extent that the excess is identified early enough in the year, additional capital projects often are added onto the fiscal year agenda.

Annex 3 contains tables that show both revenues and expenditures for fiscal years 1984 through 1986 (1987 for expenditures). Some adjustment of the expenditure figures among categories was required because the number of categories changed for fiscal 1987. In addition, the revenue totals and expenditure totals are not entirely comparable because the information was available from slightly different sources. Tables 2b and 2c vary from 2a in that the data are presented first in current Baht, then adjusted for inflation to constant Baht. Table 2c then shows the same data in per capita terms.

Public works (streets and bridges) and traffic control have been the single largest functional class of expenditure, usually accounting for between 20% and 30% of the total. A close second is flood protection and drainage, accounting for 12% to 16% of expenditures. Administration or general management requires about the same amount as flood protection. Education also absorbs approximately 16% to 17% of the budget. Although a high priority item in the current administration, public cleansing requires somewhat less of the budget, mainly due to the lower level of capital or infrastructure investment. However, capital investment will have to increase in the future as the present capacity for both garbage and night soil disposal facilities has been exceeded.

In terms of growth rates, flood protection and drainage have increased the most in the 1986-87 period, although public cleansing and social welfare and community development also showed large increases in the same period. Administration actually shows a decrease in two successive years. These growth rates should be interpreted loosely since changes in classification and possible changes in the way individual expenditures are classified make the comparisons only approximate.

The analyses in constant and per capita terms illustrate that the BMA budget has more or less held steady with inflation, comparing 1984 with 1987, and with population growth. However, 1985 and 1986 were both higher than either 1984 or 1987, indicating that 1987 represents a drop back to 1984 levels in both constant and per capita terms. The proposed budget for 1988 of almost 7,000 million Baht (including central subsidies) represents a return to 1985 and 1986 levels, although not quite when calculated in either constant or per capita terms. Overall, however, the BMA budget has fared quite well with respect to large cities in many other countries. Of course, the exceptionally low rates of inflation in Thailand help account for the BMA's ability to maintain pace with the economy.

3. OVERALL FINANCIAL CONDITION

Assessing the overall financial condition of the BMA depends in part on the starting point and the objective of the analysis. For this assessment, the objective is assumed to be for the BMA to achieve a substantial increase in its financial capacity to support capital investment. The starting point is the Governor's proposed 1988 budget and the growth rate assumptions built into it.

To carry out the analysis, a series of alternative scenarios were constructed varying assumptions about possible revenue increases and expenditure controls. Beginning with 1988 as the base year, projections of total revenues, total expenditures and the

difference are made to the year 2000 (1988 through 1992 and then 2000 are printed). The variations should be considered as orders of magnitude rather than close predictions. Annex 4 presents the results of all seven scenarios with revenues, expenditures and expected surplus (assumed to be available for capital investment) varying with the assumptions.

a. Scenario 1

The first scenario simply takes the proposed rates of growth in the 1988 budget over the 1987 budget as the basis for projections. For 1988, revenues are projected to grow at 8.59%, slightly lower than the 8.68% growth in expenditures. If those same rates of growth were maintained every year through 2000, 1988's unallocated balance of 44 million Baht would actually become a deficit by the end of the period. Clearly, the expenditure and revenue growth rate assumptions in the 1988 budget have to change at some point over the period just to meet legal requirements, to say nothing of generating any additional amount for new capital investments over and above present rates of capital investment.

b. Scenario 2

The second scenario is a worst case assumption. The same revenue and expenditure growth rates as in scenario 1 are assumed (the 1988 budget growth), but the RTG's policy of reducing subsidies is implemented by gradually eliminating over a five year period the central subsidy. No assumptions are made here about decreases in the BMA share of surcharges or shared taxes, and central government or state enterprise services such as water are not considered at all. Scenario 2 shows the modest 42 million Baht surplus for 1988 disappearing immediately when the first 20% of central subsidy is eliminated. Thus, if prevailing growth rates continue and the central subsidy is eliminated over five years, the BMA must take immediate steps just to stay level.

c. Scenario 3

The third scenario changes the assumed rate of growth in expenditures from the 1987-88 rate to a level 5% per year. In the absence of any additional control over routine expenditures, this lower rate of growth would be achieved at the expense of capital projects. Thus, the deficit would be eliminated, but there would be fewer funds available (in terms of growth) for capital investment. If the rate of inflation were to be 2% to 4%, the supposed surplus would have to be used basically to maintain present levels of real BMA capital investment. Of course the amount shown in scenario 3 as surplus actually need not be surplus but could be mainly utilized for capital investment. However, the serious message in scenario 3 is that even with an over 8% growth every year in revenues, the rate of

growth in routine expenditures will have to be held noticeably lower than in 1988 in order to generate significant, new capital investment.

d. Scenario 4

The fourth scenario introduces the first revenue change for the BMA. In addition to the expected 8+% growth already projected by the 1988 budget, scenario 4 assumes that the BMA will act quickly to develop a complete register of house and rent taxpayers and will rigorously enforce collections. This expected yield of an additional 1,000 million Baht in revenues is projected in scenario 4 to be achieved in three years - by 1991. Thereafter, the new level achieved by rigorous use of the house and rent tax will grow by the same 8+% as in previous scenarios.

The result for a number of years is significant increases in funds available for new capital investment. However, the long-run future is not as bright because of two conditions. One, the central government subsidy still is eliminated from the scenario, and the same higher rate of growth of 8.7% in expenditures as in the first scenario is maintained. Thus, the message in scenario 4 is that even a vigorously improved program of tax enforcement will still find the BMA in difficulty unless the rate of growth in expenditures is controlled.

e. Scenario 5

The fifth scenario duplicates the preceding scenario, except that it imposes the limit on growth in expenditures (held to 5% annual increase) as in scenario 3. Scenario 3 and scenario 5 thus both illustrate the same type of result. Expenditure controls are necessary in addition to revenue increases if the BMA is to generate significant revenue for new capital investment over present rates of investment. The only difference between the two scenarios is that the amounts in scenario 5 are larger because more rigorous tax collections are added to expenditure controls.

f. Scenario 6

The next to last scenario continues to play off the expenditure controls and stronger enforcement of present taxes, but with an additional element. To this point, the expenditure control scenarios have only assumed that routine expenditures will experience a more limited rate of growth than revenues, but nevertheless there will be annual increases simply due to such things as additional personnel and salary increases. Scenario 6 introduces a productivity or efficiency impact. For this scenario, the 5% growth is permitted, but then every year routine expenditures are decreased by a half percent. That is, the rate of growth in routine expenditures is actually reduced each year; growth is still projected, but less by .5% each year.

The results are striking. Every year the tighter reins on growth in routine expenditures produce an additional increment in available capital investment funds starting in 1989 at only 35 million Baht but reaching 160 million Baht by 1992. By the year 2000, the effect of reducing the rate of growth in routine expenditures by .5% a year is almost 1,000 million Baht. It is important to stress that this is not an absolute decrease in routine expenditures, only a deliberate reduction in the rate of growth.

g. Scenario 7

The last scenario moves to the much more optimistic end of the scale. It preserves the positive assumptions of expenditure controls in scenario 6 but changes the revenue assumption to an additional 6,000 million Baht achieved by 1991 due not only to the more rigorous enforcement of the house and rent tax but also to an overall program of improved tax collections, full use of rate bases, and several changes in national legislation to free the BMA from some of the limits of present law. These changes are not out of the realm of possibility as various proposals are under consideration by the RTG now. While estimates of their effects vary, and of course various combinations of changes might occur, scenario 7 presents what some officials describe as a plausible, although optimistic picture. As can be seen, the funds available for additional capital investment are startling, and for the first time show the BMA capable of serious, major financial participation in large road construction and flood control projects projected in the Sixth National Development Plan.

4. CONCLUSIONS

The preceding discussion of several scenarios for the future financial position of the BMA demonstrates that the financial health of the city depends on developing improved revenue collection procedures and introducing a process for evaluating and controlling routine expenditures. The former would be aided greatly by actions of the RTG to modernize legislation governing municipal taxes, but even without those actions the BMA can and must take steps to improve its financial health.

If these steps are taken, the BMA will be in a position to increase significantly its own funding for capital investments. Scenarios 5 and 6 show possibilities for additional revenues exceeding 1,200 million Baht by 1990 or 1991. That figure easily could be doubled or tripled or more if the BMA rigorously enforces its present tax and fee collections and the RTG reforms key elements of the tax code. Even the 1,200 million Baht level represents 15% of the annual investment requirements of the recommended BMR Study investment program. This 1,200 million Baht additional investment, achievable within a two year time period, is an increment over and above the present approximate

2,500 million Baht investment level of the BMA (40% of total expenditures). With tax law changes, the BMA conceivably could fund one-half to two-thirds of the BMR investment program.

These conclusions also do not take into account the application of direct user fees or beneficiary charges. The Governor has proposed that flood control projects, for example, be financed by beneficiary charges based on the value of the property protected. With the present exemption of owner-occupied property from the House and Rent Tax, the use of beneficiary charges based on property value are especially useful because they are both more equitable and more economically efficient than existing tax mechanisms.

D. INTERGOVERNMENTAL RELATIONS

Every municipality in Thailand is governed under the Department of Local Administration (DOLA) of the Ministry of Interior, with the exception of the BMA. The BMA also has historically reported to the Ministry of Interior but on a level equal with that of DOLA. Amendments to the BMA Act in 1985 provided for additional local authority and participation through the emergence of District Councils which provide input to the District Offices.

Despite the delegation of additional administrative authority provided the BMA through the amendments, the BMA is still limited in its decision making. The BMA apparently can influence only those elements of its structure and operations that are governed by BMA regulation. There is ambiguity between what is considered a regulation and what really is a law related to the BMA that would require Cabinet approval for change. These limits are particularly restrictive in the case of proposed fiscal changes or changes in organizational structure.

Limits on fiscal discretion include ceilings on tax rates and fees which cannot be changed without MOF approval. Similarly, any new taxes, such as a suggested BMA lottery or new tax on cigarettes, requires legal changes.

It is the responsibility of the Local Tax Policy Division in the Fiscal Policy Office, MOF to check BMA and BMR projects for budget approval. This division provides technical assistance to municipalities in tax policy, and has made estimates of the fiscal impact of changes in tax policy on the municipalities including the BMA.

With respect to organizational decisions, these too are ultimately subject to Cabinet approval. While minor changes can be made with the approval of the BMA Assembly and the Governor, any major restructuring of departments or alteration of roles and responsibilities between the districts and the departments requires approval at a higher level. More important, the

limitation on growth in the number of officials to two per cent per year severely restricts some departments that are growing faster than two percent in terms of budget and responsibility.

The BMA participates in joint planning and decision making via the extensive committee system employed in all government activity. Because the BMA covers only about 70% of the BMR, intergovernmental cooperation between the central government agencies and ministries and other provinces and districts is critical the participation of each of these is important to the effective planning and functioning of the region as a whole.

E. MANAGEMENT SUPPORT SYSTEMS

In this section the management supporting systems of personnel, planning, budgeting and accounting are discussed. These four functions, along with the ancillary support of auditing and inspections, form the core systems for staffing, and for gathering, organizing and using social and economic information in support of the political and administrative decision processes of the Governor and the executive functions of the BMA. Planning functions are the most widely dispersed with major planning groups found in several Departments and Divisions. Budget review for routine operations is relatively centralized within one Division, although capital investment budgeting essentially is a separate process. Accounting support is completely centralized within a Section, and an independent audit office of the RTG is located within the BMA.

1. PERSONNEL AND TRAINING

Matters relating to personnel are handled in the Office of the Civil Service Commission and the Personnel and Training Divisions of the Office of Permanent Secretary.

The Office of the Civil Service Commission is responsible for implementation of recruitment, promotion, termination, and salary policies set by the central government civil service committee. The BMA has a representative on this committee which sets the salary scales for all of Thailand's government officials and employees.

Current national policy limits staff increases to 2% per year for total staff although the Civil Service Commission reports a growth in total manpower (including temporary employees and teachers) at 5.6% for each of the last two years. The RTG limits apply to each level of the civil service hierarchy so that even if the BMA were to determine that it has too many staff at one level, and stop replacing staff who resign or retire at that level, it could not utilize those open positions to hire needed staff at a different level. Thus, the 2% growth limit for each level effectively precludes any significant organizational and staffing changes.

Vacancies are easily filled with as many as 20,000 people applying for a few hundred job openings, including teachers. The exception is for medical personnel. Vacancy reports are made to the Under Secretary; positions are filled either by the Governor or the Under Secretary. All job applicants must first take the civil service examination and then apply for specific technical positions, e.g. engineers.

Each division has a person in charge of payroll. A list of officials and employees is maintained in the division. This information is submitted to central payroll. Current BMA payroll for over 39,000 staff is 1,200 million Baht.

Employees but not officials can be terminated for poor performance. In the case of officials, poor performance is investigated and the employee reprimanded. If the case is major, a committee is set up to investigate further.

Currently, records on applicants and personnel are maintained manually. The Office has access to a computer but does not have the programmer skills or user knowledge to automate personnel data, for summarizing credentials, and for updating the records to reflect additional training.

For manpower planning, the Office is charge with preparing a three-year manpower development plan. Officials of the Office indicate limitations in their technical knowledge to do job analyses in order to project the number of personnel by area of expertise. They would like assistance in this area.

With respect to training of personnel, this function is performed by the Training Division within the Office of the Permanent Secretary. A staff of 94 officials and 24 employees provide training to about 10,000 staff members per year with a total budget of about 10 million Baht.

Three main curricula are targeted toward 1) administrative development, including the Senior Administrative Development Program and the Junior Administrative Development Equity Program both of which include study tours abroad, and the development program for first-line supervisors; 2) school administration development; and 3) miscellaneous training. These are offered through courses, seminars and workshops ranging from one half day to one week in length. In addition, the Division offers, through its Organization Development Branch, the Governor's Quality of Life Pilot Project which includes three-day training for all staff in examples of behaviors the Governor wishes staff to follow.

The training Division maintains a 60 acre training campus approximately 60 kilometers away from Bangkok. Lecturers are invited from universities (60%) and from the government and private sector (40%), and are paid 50 Baht per hour. Officials

expressed concern that this remuneration is insufficient to attract quality instructors. These officials felt that if the Division had three air-conditioned vehicles to provide transport to the Center for the lecturers, lecturers would be more willing to serve.

Additional expressed needs to improve the services of the Training Division include a desire to automate training records so that an individual training history could be recorded and tracked, as well as a desire for additional audio-visual equipment. Finally, officials of the Division would like to have a resident training advisor to provide technical assistance in human resource development techniques.

2. PLANNING

Several departments contain planning sections within some divisions, and two main planning units exist as distinct organizational units. The City Planning Division within the Office of Permanent Secretary is formally responsible for overall land use planning and guiding the growth of the city. The main planning unit is the Department of Policy and Planning which is subdivided into three Divisions, each responsible for a related group of functions.

The principal orientation in BMA planning activities is to capital investment planning. The planning sections within divisions of Public Works focus on the needs for new connector roads, traffic engineering or road rehabilitation projects. The Department of Sewerage and Drainage has had the extensive assistance of more than half a dozen external agencies (including the Netherlands, Japan, Australia, the United States, and Austria) which have created a "united nations" of plans for capital improvements. The three divisions of the Department of Policy and Planning view their main responsibility as reviewing and approving capital projects within the overall guidance provided by the Sixth National Development Plan of the RTG and the Third Development Plan of the BMA. Adding to the wealth of capital investment planning information is the Bangkok Metropolitan Regional Development Study, a joint planning project of the NESDB, the IBRD, USAID, and the ADAB. This study was the major input for the capital investment needs of the Bangkok region in the Sixth National Plan.

Because of the critical needs in the region for solutions to the traffic, water and drainage problems, the emphasis of the planning functions on capital investment planning is reasonable. What has evolved for the BMA is a sophisticated approach to capital investment decisions that is rivaled by few cities in the world. However, because there are numerous overlapping plans for major capital investments, it is not difficult to find extensive documentation and rationale to support a wide variety of physical

investments at any one time. The annual capital projects selection process, therefore, must respond to a variety of priorities.

In principle, any capital project must correspond to or be consistent with the capital development priorities expressed in the Sixth National Plan and the Third BMA plan. Wide latitude exists, however, in determining the order in which individual capital projects are programmed and put forward for inclusion in the annual budget. Specific project proposals may come from individual Districts, who in turn may be responding either to the technical perspectives of District staff or the requests/demands of individual citizens and groups. Specific projects also are put forward by departmental planning staff, or by other departmental technical and administrative staff. Still other projects are specifically identified by the Governor and his Deputies whose priority in the early period of the administration has been on public cleansing.

Specific capital projects are reviewed within the appropriate Division of the Policy and Planning Department. At that review stage, the Department has developed an impressive evaluation process for physical projects that includes:

- A financial evaluation of the costs and sources of funds;
- An administrative evaluation of the personnel required for implementation;
- A benefit to land and people scoring which places higher values the more a project directly benefits the total population and total land area of the BMA and lower values the more indirect and more targeted are the benefits;
- An evaluation of the extent to which the project directly responds to priorities of the RTG and the BMA, separately evaluated with a weighting based on the present 83% BMA funding and 17% RTG grant subsidy funding ratio;
- A benefit cost evaluation which requires that benefits at a minimum equal cost, but adds a judgmental component which places a value on the degree of improvement in five areas, listed in order of lowest importance to highest as social welfare, social infrastructure, public health, environment, and social economy;
- An institutional feasibility evaluation which scores a project higher if it can be carried out within one department than if it requires the collaborative efforts of more than one department; and

- A technical feasibility evaluation which gives the highest score to projects which are basically the same as other projects carried out before by the same department, next highest to those similar to projects carried out by others than the present executing department, next to those which have been piloted or experimentally demonstrated, and last to those which are theoretically feasible.

The attitude with which this somewhat elaborate evaluation process is used corresponds to the view that it is a technical tool that can assist with, but not replace, the political policy judgment of the Governor and his staff. In that sense, the scoring system has been developed to help rank projects based on a combination of technical and judgmental assessments. This ranking and the factors that make up the process then can be used to assist in making judgments.

If there is any particular weakness in the capital planning process, it is not in the availability of significant technical input into the process. Rather, the first problem may be in the fact that so much of the technical planning for major infrastructure needs has occurred outside the BMA through donor agency and NESDB efforts. This may be warranted to the extent that many of the problems are larger in scope than the BMA's present administrative and financial capability. However, it seems also to make it difficult for the BMA to establish its own set of priorities for the uses of its own funds. This may not be a real problem in that several interviews indicated that it is the priority of the Governor that determines which projects will be carried out and which will not in the event of conflicts among priorities or the need to reduce overall budget allocations due to the lack of revenues. Based on the amount of time available to the management assessment team, it would not be fair to make a judgment on this issue. However, the experience of the assessment team in other settings suggests that the type of process which reserves large infrastructure investments to the central government tends to reduce municipal capital investments to much smaller scale projects which may be suboptimal. It is difficult to establish a local priority system and decision-making process which insures that the large number of relatively small projects add up to long-run solutions to major problems. For example, in many cities, small road repair projects are carried out over separate parts of the network without assessing whether a larger investment in fewer projects would be a more optimal solution to rehabilitating the network. This issue is raised here as a question for the BMA to consider. How can BMA add to its present, relatively sophisticated capital projects evaluation process, mechanisms for establishing quantitative targets for long run improvements and evaluations of projects based on contribution to those quantitative targets?

One mechanism that could affect this aspect of the capital planning process is a more overt relationship between the BMA's recordkeeping for its physical assets and the long-range planning for rehabilitation or replacement of physical assets. There is a Registration and Properties Section within the Department of Finance which keeps records of municipal physical assets, including major equipment and municipal buildings. These records seem to be sufficient in that they include information on year of construction and annual reports from each District Director on the current condition. Such records, however, do not include key aspects of physical infrastructure including the entire road and klong network and other drainage facilities. An upgrading of this property recordkeeping function to develop a complete inventory of physical infrastructure within the BMA and an integration of these records with the capital development planning process would assist the BMA in linking individual capital projects to longer run objectives for extension of new physical infrastructure and the rehabilitation or replacement of existing infrastructure as it ages.

The second problem with the present capital planning process is one suggested mainly by the BMA officials interviewed. Many of those interviewed felt that there is presently an insufficient number of planning staff with the technical training appropriate to their capital projects planning responsibilities. However, this may be more of a problem of organization structure than of staffing. Social and economic planning staff who review civil works projects expressed the need to hire engineering staff while the engineering staff in the planning section of another department suggested the need to hire more social and economic planning staff to work with them. Either formal shifts in assignments or creation of cross-Department work groups may solve the problem more effectively than additional staff.

The third problem is the organizational isolation of the physical planning staff responsible for developing long range growth control plans. Located in the Office of Permanent Secretary, these staff feel less connected to the other planning activities of the municipality. In addition, because their previous efforts at establishing a master physical plan for the city have not been adopted, they feel less effective.

The final and major limitation to the planning process is the insufficient attention to planning for the routine operations of the municipality. The planning process is oriented almost exclusively to the physical or capital operations, which constitute about 40% of BMA expenditures. The Policy and Planning Department does consider the overall staffing levels of the other Departments and Districts in a general assessment of the extent to which fewer or more staff are needed to perform their routine and capital functions. However, this does not seem to be a significant input to the routine budgeting process. The Department of Inspector General also has functions related to monitoring the status of ongoing projects, but this does not seem

to extend to the routine operations of other Departments and Districts. A more extensive discussion of this issue is included in the next section on budgeting.

3. BUDGETING

The budgeting process for the municipality consists of two components - the current operations or routine activities of the BMA and the capital investment or project activities. As discussed in the preceding section, the capital projects planning process is well supported by technical information and formalized processes for considering technical, economic, social and political (in the sense of conformance with policy) merits of potential projects. Financial allocations to these projects eventually are based on the amount of funds available after the routine portion of the budget has been determined. That usually means about 40% of the budget is allocated to the non-routine or capital projects component.

Since project development is treated as the residual component depending on funds available after routine operations, the evaluation of the routine portion of the budget is critical to the efficient operation of the BMA. Overall budget review is the responsibility of the Budget Division of the Office of Permanent Secretary. As required by the RTG, the BMA has operated with a Planning, Programming, Budgeting System format for the past five years. Within this format, there are eight major areas or Branches:

- City Cleaning
- Public Works and Traffic
- General Management
- Drainage and Sewerage
- Health
- Social Services and Slum Upgrading
- Education
- Commercial

There has been some variation in these categories over the past several years, but the major objectives have been similar.

In principle, each of the Department's and the Office of Permanent Secretary's routine and capital spending can be classified according to the eight branches. For the Departments, virtually all of any one Department's expenditures can be classified into only one of the branches, minimizing the need for

complicated crosswalks to show the relationship between Departmental and Branch classifications. In practice, some Departments have some activities that fall into a Branch other than that in which most of the Department's expenditures are classified. This has evolved over time as a department having one main function is given responsibility for a relatively small activity that must be classified under a different functional branch. These changes do not represent major classification problems.

Within each branch, all expenditures can be classified as belonging to one of three categories:

- General Management
- Main function (the main activity of that Branch, e.g. cleansing)
- Development (essentially capital, but also some non-physical projects)

Approximately 60% of the BMA's total expenditures fall within the General Management and Main function classifications with the remaining 40% in Promotion and Development. No estimate of the breakdown between general management and main function is possible because the actual accounting for expenditures is not yet able to support the PPBS. Thus, the sixty percent/forty percent breakdown is the same as the distinction between routine operations of the BMA and capital or investments.

Currently the PPB System is more of a classification system used by the Budget Division than a planning and budgeting tool used by the Departments and Districts. While both the Departments and Districts are able to classify their expenditures for capital projects (the forty percent portion of the budget), it is taken for granted both by the operating units and the Budget Division that the routine portion of the budget (the sixty percent) is the minimum necessary and no particular justification is required. Officials are aware that this assumption may not be warranted, and virtually everyone interviewed expressed concern for their inability to develop sufficient information on which to evaluate the efficiency of routine operations. Thus, there is genuine interest on the part of most officials interviewed to see the PPB System implemented more completely including detailed use of workload measures, volume measures of production or work accomplished, and levels of activity to justify and evaluate the routine portion of the budget. At present, however, neither the workload performance measurement system nor the financial accounting system is in place to provide this type of decision making support.

The remaining limitation in the budgeting process is the proliferation of line items and the lack of any systematic classification of line item expenditures into a small set of

consistent and mutually exclusive object of expenditure categories. There are more than 400 different line-items, and more can be added if a new item is purchased. This lack of an object of expenditure classification severely handicaps the accounting system as well, increasing their workload and intensifying the difficulty in providing accounting support to the PPB System.

These limitations in the budgeting process are well recognized by officials in both the Budget Division and Accounting section. Given the complexity of the BMA's functions and the magnitude of expenditures, it also is unlikely that more extensive development of the management information and financial accounting components can be very effective without at least a minimal degree of automation.

4. ACCOUNTING

Some of the limitations of the accounting system with respect to its ability to support the PPB system has been discussed in the preceding section. As far as its function for providing a clear audit trail for financial control, the accounting system works very well at present, although the manual nature of the system and the volume of activity make it impossible to provide any significant support to other uses for financial information. For example, if an ad hoc report on revenue collections other than the regular monthly report is required, several ledger books have to be consulted and figures extracted and added by hand to produce the report.

Furthermore, the accounting system's regular monthly reports by Department and category capture strictly cash received and cash expended with no easy method either for computing actual expenditures versus budgeted expenditures or providing Department or District officials with estimates of the remaining funds available. In part, the acceptance of the sixty percent portion of the budget as routine and more or less automatic is a response to the lack of at least a partially automated system following a uniform classification system. That is, if there is strict control on numbers and levels of personnel, and most of the expenditures in the routine portion of the budget are for personnel, then the checks regularly issued by Department and District Finance Directors following approval by the Treasurer and posting by accounting, by definition are within budget and need not be examined further. Thus, the system provides financial control in that no District or Department Finance official can spend money without documenting the receipt of goods or services, and then only in accord with strict controls on the number of personnel, their levels and salaries. However, the system provides no means of assisting Department and District officials in examining the efficiency or effectiveness of their expenditures. (See Chapter V, Section A.1, on the Department of Public Cleansing for an example of how this might work.)

For normal reporting purposes, the General Ledger Accounts are closed monthly to make a Trial Balance. There are more than ninety revenue and expenditure accounts to be posted to the General Ledger for this trial balance to be created. This situation is brought about by each Department and District having a minimum of two bank accounts -at least one for revenues and one for expenditures. That system is established in order to decentralize the large volume of manual handling of revenues and expenditures.

Major improvements in the accounting system are possible only by two developments. At a minimum level of automation, the accounts could be kept in several non-connected computers which would facilitate the process of entering, verifying and tabulating the present account books. Summary information from each of these "computerized" ledgers then could be combined by electronically reading files that are manually carried to one machine. This process would replicate the present system, but speed it up considerably and make it possible to recombine the financial information in a variety of different formats of use to Department and District officials.

Also a part of the minimum level of improvement necessary is for Accounting and Budgeting to combine in a task force to further develop the classification system begun with the PPB System. As noted in the previous section, this activity will entail developing a uniform classification of objects of expenditure to replace the present line items and developing a coding process that will uniquely identify every expenditure according to:

- Organizational unit/subdivision
- Object of expenditure
- Main PPBS branch classification
- Within branch, whether general management, main function or development
- Within development, which of twenty-seven capital programs (presently twenty-seven with three being added).

The level of organizational unit or subdivision should be detailed enough to allow analysis of any level at which managerial discretion for expenditure exists. In addition, for those activities of the municipality which earn or secure a revenue through user charges or commercial sales or rentals, the classification system should be able to segregate those activities so that the municipality can determine the relationship between costs and revenues and make explicit decisions about the degree of subsidy and the degree of cost recovery. This recommendation is not an argument for a commercial profit orientation for the BMA, but rather is a

recommendation that the BMA have the information available to evaluate its public service responsibilities in terms of who benefits from services and who pays for services.

5. CONCLUSIONS

In summary, the most critical weakness in the financial management support systems are:

- The need to complete the classification and coding system for expenditures, utilizing the same coding system for both accounting and budgeting processes; and
- The need to develop a process for measuring the productivity and efficiency of Department and District routine expenditures.

Without the first, the accounting system will not be able to support the planning and programming process. Without the second, the BMA will find it extremely difficult to control the growth of the two critical financial needs. The next chapter assesses the routine functions of the BMA's major service programs.

CHAPTER V. MUNICIPAL SERVICES

In this chapter the BMA's major services are reviewed. For convenience, they are grouped in five major headings:

- Civil Works;
- Health Services;
- Education;
- City Police;
- Social Services.

Each of the major services is described in terms of its main functions and its organization and staffing. The focus is then on the management issues of planning and budgeting for service requirements and assessing the productivity or performance. Functions related to the municipal infrastructure are grouped together under the category of "civil works". These include functions of city cleanliness, drains and sewers, roads, and municipal buildings and building control.

A. CIVIL WORKS

1. CITY CLEANLINESS

The BMA provides for the collection and disposal of garbage and nightsoil and for street cleaning. Collection and disposal of nightsoil and operation of garbage disposal sites is at the Department level (Public Cleansing) while sanitation sections in each of the 24 districts are responsible for collection of solid waste and for street cleaning.

The department operates approximately 600 trucks for twice a day collection of garbage. Approximately 3,000 laborers collect 4,000 tons per day of solid waste from households and businesses. In addition, the Department is responsible for the collection and disposal of hazardous waste from the public and private hospitals, waste from the markets, and indirect collection from dumpsters and from streetside waste bins in areas too dense for door to door pickup.

Garbage is disposed of in a composting plant that is 30 years old. This plant has a technical capacity of 1,120 tons per day but effectively can handle only about 800 tons per day. The remainder of the garbage is dumped in a landfill. Plans are for two more plants that will process 1,000 tons each at full cycle to create fertilizer as a byproduct. The Department is currently looking for a 1,000 rai site for a new landfill and is planning

for a transfer station. Finally, with funding from the United States to the National Energy Administration, there is a feasibility study underway for incinerators.

Nightsoil is the sole responsibility of the Department of Public Cleansing. Trucks collect two cubic meters of nightsoil from septic tanks for disposal into a 900 cubic meter plant where the waste is converted to fertilizer. Additional plant capacity of 600 cubic meters is intended. Street sweeping is provided using 22 sweeper trucks and approximately 3,000 sweepers. In addition, the Department maintains water trucks for firefighting, and assists with portable toilets and facilities for ceremonies. The Department also maintains 9 sanitary trucks.

The Department of Public Cleansing is organized into five divisions, including a secretariat, a technical division, nightsoil collection and disposal division, garbage disposal, and a public cleaning service division. Routine maintenance and minor repairs of vehicles are conducted by the Department and Districts while major maintenance activities are the responsibility of the Department of Finance.

The Technical Division of the Department of Public Cleansing collects data on a daily basis to calculate the cost of methods used and to determine efficiency. Detailed information on the service delivery process are maintained: new truck capacity, the number of trips per day, the number of workers per truck per trip, how much garbage was collected per truck per trip. Over 600 trip reports per day are recorded and analyzed by a staff of three people, using an 8 bit microcomputer. The average cost per ton for each district and truck are calculated and monthly discussions are held with each district chief to improve performance based on the results of the daily reports. Current costs average 200 Baht per ton for garbage collection and disposal for garbage disposed of at a landfill, and 460 Baht per ton for garbage collection and disposal through the recycling process.

Approximately 7 million Baht are collected each year in fees. The fee charged is 4 Baht per month per household for collection of an amount of less than 20 liters. A recently passed law raises the fee amount that can be charged to 40 Baht, but the Governor has stated that the fee will remain at the 4 Baht level for the near term. The fee charged commercial clients (e.g., hotels) is slightly higher than that for residents.

Fees are collected from less than 50% of the households that receive garbage collection services. According to department personnel, the 4 Baht fee, which has to be paid at the district office, and is "less than the price of a cup of coffee", is a nuisance many residents simply ignore. Moreover, the department does not receive information from the district office on exactly

who pays the fee, only reports on the total amount of fees paid. Thus, the department is unable to enforce consistent fee collection, and therefore loses revenues it should receive.

In general, department officials feel the fees should be raised, and should be enforced. In addition, they are interested in the possibility of some type of sliding fee scale based on ability to pay. However, officials express the philosophy that garbage collection is a service rather than a full cost recovery function.

Department staff indicated an interest in a pilot study which would assess different approaches to dealing with the cost/fee problem, such as turning the garbage collection over to private contractors who would be paid on the basis of the amount of garbage collected and the amount of fees they collect, a form of double incentive system. Different types of incentives could be tested to find the most cost-effective approach.

The fee collection system for nightsoil is much more effective since it is collected at the point of service delivery. If the resident does not pay the fee, their nightsoil is not collected. Therefore, 90% of the fees are collected. But, interviews revealed that only about 20% of the households request nightsoil collection, suggesting that close to 80% of this waste is being disposed of in illegal ways, such as dumping in klongs, illegal connections to drainage pipes, or pick-ups by non-BMA individuals who then dump the waste in canals or other locations.

Each truck uses a technograph to calculate trip length and to guide scheduling decisions. In addition, the laboratories in the Technical Division examine the physical and chemical content of both garbage and nightsoil to help determine the most appropriate disposal and treatment methods. All analysis is conducted by season-rainy, tourist, etc. This type of information, together with the efficiency information collected are used to plan for the future (the Department has planned to the year 2000), and to justify budget requests.

2. DRAINAGE AND WASTE WATER DISPOSAL

Flooding is one of the most severe problems facing the municipality of Bangkok and surrounding areas. As such, drainage and sewerage services are provided by the BMA as well as the central government. The BMA serves the canals, provides drainage pipes and other facilities linkages, and waste water treatment through its Department of Sewerage and Drainage (DSD) and the 24 Districts.

The Department is organized into five divisions including an Office of the Secretary, a Technical Division, and three operating divisions. The Technical Division is responsible for waste water research, planning and project selections, and design

and construction supervision, through five sections. The operating divisions are responsible for 1) drainage control, including sewer maintenance, drainage engineering, pumping and gate control through seven sections; 2) canal maintenance, including survey and planning through four sections; and 3) waste water treatment, including two treatment plants through four sections. Each division has an administrative section.

Responsibility for drainage is divided between the Department and the Districts along size dimensions. The Department is responsible for all named streets. Districts each have a public works subsection which is responsible for all service drains on the soils, including small canals and ditches. Districts follow a Master Plan and must submit all proposed capital projects to the Department for advice and adherence to standards.

Once approved, however, the Department does not monitor what the districts do.

The Department maintains a ten-man emergency unit or "task force" which services pumps, repairs manhole covers and similar activities on an as needed basis. In addition, the Department has eight flood fighting units. There are approximately 1000 permanent employees in the Department and a temporary staff that ranges from approximately 200 to a high of 600 during the flooding season.

The Department has two sub-offices. Three other smaller offices are maintained as well with staffs of 10-20 each. In addition, there are 25 large pumping stations and 80 small to medium pumping installations.

The Department's annual budget is approximately 700 million Baht, or approximately 12 per cent of the regular BMA budget. Two-thirds of this, 464 million Baht, are for 92 large land and construction development projects. If not all of this money is spent, it can be reallocated to other new, mid-size projects with the approval of the Office of the Deputy Governor for Finance and Administration.

Unique to the Department of Drainage and Sewerage is a project budget monitoring system which tracks bimonthly the status of each project in terms of its implementation and disbursement schedules. This system was developed within the department and runs on a microcomputer. Currently, there is a combined delay of about two years across all projects considering the total delays behind schedule for each of the 92 projects (sixty-seven of the projects were scheduled for completion at this date but only 24 are actually finished). One of the explanations for this is that there were changes in the bidding regulations which delayed selection of contractors and consequently the start of the work.

Contractor delay is subject to penalties in the neighborhood of 0.05 % of total cost, the penalty varies by the importance of the project. Such penalty payments are collected by the Department

of Finance. To be eligible for bidding on a given project, contractors are required to register in one of three categories based on project size, e.g., projects of more than a million Baht, etc. Contractors with a history of poor performance may be ineligible for inclusion in the registry.

One of the major activities of the Department is development of a computerized flood control system. Currently, data are compiled daily on precipitation and pump running during the rainy season and keyed into a computer system. The Department hopes to develop a remote sensing capability to collect this information automatically. From such a data base and information network, including the Land Information System, the goal is to develop a flood simulation management model and flood control center. Discussions are under way with Japanese assistance groups to assist in this effort. An additional key information need is for a complete mapping of the drains. No such inventory is available currently.

Key issues for the Department are planning and staffing. With respect to planning, historically the Department has followed the Camp, Dresser and McKee Master Plan which was completed in 1972. As that plan is outdated, however, a new comprehensive plan under grant by the USDTP is being prepared. In addition, there are 11 main studies being conducted by a variety of donor agencies plus several smaller ones dealing with flood control and drainage in various sections of the Region.

With respect to staffing and organization, a key concern of the Deputy Director is the number of staff. While the annual budget has grown from 100 million Baht in 1977 to 700 million in 1987, only one additional official has been added to the Department. Other staff concerns include a desire to strengthen the Technical Division to include a research and development component. Currently, there are no engineers in this Division, engineering support is provided by the Drainage Division. Similarly, there is an interest in restructuring the Department to include a mechanical division. Currently, each operating division within the Department has its own section for routine maintenance, repairs, inventory and spare parts.

3. PUBLIC WORKS

Public works in the BMA include engineering services to the other Departments, building control and inspection functions, right of way and land acquisition, street maintenance (at the District level) and street construction (typically contracted out).

a. Building Control Division

The building control division provides four types of services through its four main sections: 1) building permits; 2) building control; 3) building mapping; and 4) building design service. The workload of the division has been increasing, with 466 new and renovated buildings in 1985 and 547 in 1986, a 17% increase.

The responsibility of the building permit section is to assess the proposed construction of a building to ensure compliance with relevant BMA building codes. This assessment focuses on a variety of issues concerning the design and use of the building:

- Does the building fit relevant zoning ordinances?;
- Is it compatible with surrounding properties?;
- What will be the demand of the building for basic infrastructure services, such as sewage and drainage?;
- What will be the building's environmental impact?

Following a determination of compliance, a building permit is issued, and the proposed building is entered on a roster of building projects underway. A staff of 26, mainly engineers and architects working in the BMA office, implement the building permit functions. The division collects approximately 5 million baht per year in building permit fees.

Once building construction is underway, it is the responsibility of the building control section to inspect periodically the building to make sure that the actual construction of the building remains in compliance. A field staff of 26 technicians perform for this monitoring function. They enter their monitoring information, being careful to note any deviations from the approved building plan, in a field report which is included in the paper record of the building.

The building control division works closely with the City Police Department in performing its compliance monitoring function. A building code violator will be warned initially, and told to bring the building into compliance. Failure to comply can lead to a fine of no more than 100,000 Baht. Failure to pay the fine, or continued code non-compliance, may result in a jail sentence of up to 2 years, although interviews revealed a strong reluctance to jail a person for this type of offense. A fine coupled with a strong appeal for citizen compliance with "the moral duty to obey the law" appears to be the preferred approach. Also, as will be discussed in Section D on the operation of the City Police Department, the capacity of the city police to enforce vigorously code violations is limited.

Upon completion of the building, the building mapping section records information on the building's characteristics location, physical dimensions, usage, and so forth in the official record of the building, and locates the site and position of the building on a map of the municipality. Fifteen staff members work in this section.

The final section, building design service, offers a service to municipal residents wishing to build a small house. Residents desiring to build a house pay a nominal amount, about 4 Baht a square meter, to receive architectural and building advice from the staff of 17 in this section. According to staff in the division, this is a very popular service offered by the municipality to its citizens.

Salaries are by far the largest component of the division's budget, averaging about 3 million Baht per year. The budget process is tied to the programs of the Department of Public Works, which in turn follow the BMA master plan. Growth in the service demands of the department, such as expected new building starts, are important components of the budget planning process.

It should be noted that the work of the division is all done manually. Computers, and training in their efficient use, are very much desired by division staff to improve the work management processes of the division, and to give them the time and ability to assess more comprehensively the performance of the division (which they are aware of the need to do). Given the lack of such technology, merely keeping up with the growing demands faced by the division, given the building boom in Bangkok, exhausts their available time and resources.

b. Construction and Maintenance Division

Managing improvements in major roads, streets, foot bridges, monuments, and streams under the BMA's jurisdiction is this division's responsibility. This includes 300 kilometers of main roads, 1200 service roads and streets, 500 bridges, and 160 footpaths.

The division's work is organized into 12 sections. Sections 1-5 are responsible for maintenance functions in five regions of the BMA. There is also a planning section, a mechanical section, a materials section, a bridge section, a utility operations section, a decorating section, and a secretary's office. Division Staffing includes about 200 in the civil and mechanical engineering classification, and about 800 skilled laborers, such as truck drivers and machine operators.

The budget for 1987 is approximately 217 million Baht, an amount determined largely in response to the BMA master plan. According to our interviews, the guidelines of the master plan are not inflexible with regard to the construction and maintenance division's budget. Deviations from the master plan are possible,

if it can be demonstrated to the Deputy Governor and a special committee in the Governor's office that circumstances warrant a modification in the division's budget. The request may have to gain the approval of the BMA Assembly. According to division staff, these types of requests have been approved several times in recent years. Staff estimates of the annual increases in the budget were about 3% per year.

The work of the division staff is often in response to service demands originating at the district level. A District Director, for example, will report a problem to one of the five regional offices of the division, such as a recent drainage problem that occurred in the Thonburi District. The problem will be handled at the region level, if the region has the budget resources to satisfy the service request; otherwise, the problem will be forwarded to the division level for action. Also, division inspectors are expected to routinely survey areas of the city under the division's jurisdiction, looking for needed repairs, such as potholes that should be filled. Another source of input on city maintenance needs comes from the Governor's policy that all civil servants at grade level 9 and above will spend one full day per month critically touring a section of the city, looking for maintenance, repair, or public cleanliness problems. They then are responsible for making sure that the responsible city official takes action to correct the problem.

To assist the division in scheduling maintenance operations, the division uses a Maintenance Coefficient Index (MCI), which combines visual inspection information with maintenance repair record information to "score" a particular facility, such as a bridge, in terms of when it will need additional maintenance work.

This approach evidences a positive division attitude towards using a variety of information sources in a systematic way to allocate maintenance and repair resources. Based on interviews with division staff, it appears that the MCI process could be strengthened through the use of computerized data base and analysis routines. Presently, the process is manually completed, which reportedly is very time consuming and limited in terms of the information that can be included in the analysis.

One of the main problems revealed in the interviews with division staff was the difficulty of trying to deal comprehensively with the problems of road maintenance in a piecemeal manner, "...patching instead of repairing." This is especially a problem in some of the older areas, where crews repeatedly patch the same sections of a road, "... a very inefficient way to handle the problem", rather than expending the resources to repair completely the road.

B. HEALTH SERVICES

Health services within the BMA are administered by the Department of Medical Services and the Department of Health. The Department of Medical Services is responsible for the operation and supervision of the four hospitals under the BMA's jurisdiction and for the four-year-old nursing school, which has 660 students and admits 160 applicants per year. Total medical services staff is 2,601.

Total hospital bed capacity for the four hospitals is approximately 2,000, and together they average an occupancy rate of between 65% to 80%. About 60% of the patients receive acute care services, with the remainder under chronic care supervision. As a public medical service, the hospital administrators follow an "open access" policy of providing service to all seeking medical care. About 80% of the patients receive free care. The fees that are charged are at the discretion of the attending physician, and appear to be based roughly on ability to pay: an average of about 30 Baht per person for out-patient care and about 80 Baht for in-patient care. According to the staff interviewed, the fee structure is much lower than the 50 or so private hospitals located in the Bangkok area.

The budget for Medical Services is approximately 400 million Baht a year, and increasing steadily in response to rising medical costs. Department members interviewed estimated that medical costs are rising at about 15% per year in Thailand, due largely to increases in the cost of medical instrumentation and medicine. To offset these rising costs they are searching for ways to improve the efficiency of their operations, such as using satellite clinics to provide primary care services. They seem to feel this step will help to lower reliance on hospital service for primary care, which is a more expensive way to provide that type of care.

Service quality is also a major concern. In particular, medical services personnel are seeking ways to increase the supply of medical technicians to operate the technical equipment and instrumentation required in modern medical services. They appear to be very much aware of the availability of modern medical technology, such as computerized patient scanning equipment, but lack enough properly trained technical personnel. They are developing a three year manpower development plan to meet this need for skilled medical technicians; they indicated a need for assistance in the development of such a plan.

The medical services staff also mentioned the need for training abroad in advanced surgical procedures. Again, there appears to be an awareness of the availability of medical expertise which could improve the quality of medical care in Bangkok, and a sincere desire to acquire additional skills to improve the quality of their medical services.

Department of Public Health services complement those of medical services through their emphases on health promotion and disease prevention. The department administers its programs through eight divisions: health support; health promotion; environmental health; animal disease control; dental health; public health nursing; communicable disease control; and drug abuse and prevention. It also is also responsible for administering a network of 57 health centers located in 6 public health sectors across Bangkok.

The Department operates with a budget (1986) of approximately 666 million Baht, of which 439 million Baht is for capital expenditures and 227 million Baht is for current operating expenses. The Department employs 2,013 officials.

A Major emphasis of the health promotion effort is to work with low income pregnant women and new mothers to get them to begin to adopt healthful living practices, such as good nutrition for themselves and their children. An integral part of this effort is the use of community volunteers for service delivery. The volunteers work with clients on a ratio of 1 volunteer for every 10 clients, to provide individual and group counselling on appropriate health practices. Public health staff report that the volunteers, when properly trained and managed, can greatly expand program coverage. They would like to have some assistance, in fact, to recruit and train more volunteers.

The issue of volunteers relates to a serious need of the public health workers working in the poor areas of Bangkok: organizing communities to deal with health problems in their areas. Those interviewed felt that their biggest need was for training and assistance in developing community leaders and organizations which eventually would be a source of change and innovation in health practices in the poor areas of the city. They said that simply trying to get people in these areas to go to a meeting to discuss their needs or the needs of their neighborhood was almost impossible. Thus, they are very interested in receiving assistance in community organizing and public health promotion.

C. EDUCATION

233,321 students attend classes in the 427 schools administered by the Department of Education. The department is responsible for compulsory education provided by the BMA, which extends to the sixth grade. It shares this primary education function with private schools, which enroll about 45% of all grade 1-6 students, and with Ministry of Education schools and university demonstration schools, which together enroll about 8-10% of the students at this level. The BMA students are notably different from those of the other schools in that they tend to come from poor families and have disproportionately more learning problems.

The department's budget of 1,102 million Baht is 7.6% of the total BMA budget. About 76% of the budget comes from central government subsidies; the BMA provides the remainder of the budget. It is administered through four divisions of the department: Office of the Secretary; School Division; Supervisory Units; and a Technical Division.

The system employs 12,022 teachers. Department policy maintains teacher-pupil ratios of 19:1, with a limit of 35 students per class. Interviews indicated a substantial demand for teaching positions in the system; administrators expect 20,000 examinations for the 600 positions open for next year. Teacher turnover is about 1000 per year (8.3%).

The educational philosophy of the department is comprehensive with its emphasis upon the total student. The school curriculum stresses moral and community involvement values, as well as the traditional academic skills. Poorer students in the system, most of whom attend slum schools, are provided uniforms, textbooks, school supplies, and food.

Given the relative preponderance of poor children in the BMA school system, it is commendable that the department is able to achieve the results it does. In a 1985 evaluation based on standardized tests, 99.14% performed to their grade level. Seventy-nine percent of the students completing the sixth grade continue on to secondary grade levels. For those students not continuing, the department offers vocational training in three vocational schools. Training in electronics, machine operation, carpentry, wood working, and other similar courses, is available. Courses vary in length, from six months to two years.

Several problems identified during the fieldwork should be noted. A major concern was the relative disadvantage of the BMA schools in terms of the teaching materials and other learning aids available for the students. Those interviewed commented on the fact that BMA students have access to much fewer textbook materials than the Ministry of Education students. Also, there is a serious concern about the ability of the school system to keep pace with the expected rise in the number of primary school age children in light of potentially tighter fiscal policies at the central government level.

BMA administrators are particularly concerned because they see the greatest growth in the BMA student population coming from those areas of the city, mainly slum areas, that have students with the most severe learning disabilities and, therefore, will require extra resources in order to be able to teach them effectively.

D. CITY POLICE

The City Police Department was officially titled in 1978. However, since 1972 the BMA has been responsible for certain police functions. These functions include the maintenance of public order, the enforcing of city ordinances, and the supervision and enforcement of municipal by-laws and other regulations. The department's jurisdiction has remained limited to non-criminal offenses directly related to BMA rules and regulations.

Although the formal title came in 1978, the City Police Department has had to rely upon the Metropolitan Police (i.e., section of national police force) to help it perform its responsibilities. Prior to 1982, the Metropolitan Police Department loaned personnel to the City Police Department so that it could perform its basic functions, such as the apprehension and arrest of regulation violators. This assistance was withdrawn in 1982 and, as will be discussed below, has resulted in staffing shortages and other operating problems existing today. The 1985 reorganization of the BMA expanded the duties and responsibilities for the city police. These responsibilities were divided into 5 categories:

1. Maintaining cleanliness and orderliness;
2. Monitoring public health and sanitation;
3. Maintaining and monitoring premises;
4. Monitoring construction;
5. Monitoring the signboard tax, property tax, and the house and land tax.

The department is organized to carry out these responsibilities in 54 police districts (across the 24 BMA districts) with approximately 80 to 100 police personnel per district. The budget for the last several years has averaged between 7-8 million Baht, but was increased in the 1987 budget to about 26 million Baht (according to interviews, at the request of the Governor) to purchase additional vehicles and other equipment. Those interviewed in the department expect the budget to return to the 7 to 8 million Baht level in the next year, which would be the lowest for any BMA department.

The budget process of the department "follows the policy of the Governor." Basically, this involves estimating next year's budget needs on the basis of the projects included in the BMA master plan and requesting small increments over the previous year's budget. Occasionally they will receive additional funds for "special projects" (i.e., projects not in the master plan), such as purchase of motorcycles or investigation equipment.

Analysis of what the department does with the money it receives is limited to calculating the overall caseload handled in a year, at the district and department levels. It appears that this information is used solely to justify next years budget and not as part of a performance monitoring effort. When asked about the collection of information to assess service delivery and/or performance, the person interviewed emphasized that the department is understaffed and barely able to keep up with its "routine" work. Collecting these kinds of data and information requires additional personnel, which they have not been able to get from the BMA.

A more pressing need than performance analysis, according to department staff interviewed, is securing more personnel to conduct routine investigations of suspected or actual BMA violations. Apparently, there is a substantial backlog of suspected violations but insufficient personnel to the necessary investigations.

It appears that the Police Department's preoccupation with basic, routine work may reflect the unresolved, ambiguous nature of the department's legal jurisdiction and organizational structure. Since August, 1985, the department has been seeking from the BMA a formal authorization for its organizational structure and legal jurisdiction. Not having this authorization means that the department has to continue to borrow temporary staff from other departments and is unable to develop its own personnel and, therefore, is unable to establish its own identity as a department within the BMA bureaucracy. According to the persons interviewed, only two positions have been legally authorized for the department, the positions of the director and deputy-director.

Another serious problem concerning the operation of the department is its continued reliance upon the Metropolitan Police Department to, in effect, provide city police enforcement power. Since it lacks a clear mandate to arrest and fine offenders, the City Police Department must rely upon the Metropolitan Police to arrest BMA offenders and, where appropriate, to collect fines from them.

The problem with this arrangement is two-fold. First, even though the City Police Department sets uniform standards for fines across the 24 BMA districts, consistent fine collection is very difficult because the city police often have to rely on the metropolitan police to collect the fines. But, according to those interviewed, the uncooperative attitude of the metropolitan police means that many fines go uncollected. The impact of this situation on fines revenue can be seen in the drop in fines collection from 1984-85 to 1986. According to information supplied by the City Police Department, fines revenue went from approximately 26.1 million Baht in 1984, to 29.4 million Baht in 1985, then dropped to 7.6 million Baht in 1986, the year

following the 1985 BMA reorganization. Also, the caseload of the department showed a similar pattern, from 153,838 cases in 1984, to 208,950 cases in 1985, and declining to 54,434 cases in 1986.

In addition to fines collection, the City Police Department, lacking a legally-defined arrest power, has to rely on the metropolitan police to arrest violators of BMA ordinances. As in the case of fines collection, the metropolitan police view these arrests as, at best, a very low priority for them. Therefore, according to the city police, the metropolitan police do not put much effort into pursuing them. These examples highlight the central administrative dilemma of the City Police Department. It has been assigned an expanded set of responsibilities under the 1985 BMA act, yet it appears to have to operate without a clear legal mandate, and has to rely upon others, apparently uncommitted to providing necessary assistance, to meet these responsibilities.

E. SOCIAL SERVICES

The BMA provides a variety of services under the broad rubric of social welfare. Administered within the Department of Social Welfare, established in 1974, the services are provided through three main service delivery divisions, sub-divided into several sections each (approximate 1987 personnel and budget figures provided by Department of Social Welfare staff):

- Social Works Division: child and youth welfare section; family assistance section; general welfare section; community development section. Sixty officials and 40 employees work with a budget of approximately 16.4 million Baht;
- Recreation Division: sports promotion section; music and entertainment section; youth center and children playground section; public library section; Bangkok Metropolitan Youth Center (Thai-Japan). 318 officials, 144 employees, and 100 temporary workers (i.e., volunteers paid a small stipend) work with budget of 136.4 million Baht (about 30% for operations, and 70% for construction);
- Public Park Division: design section; five public park sections; natural science section; nursery section; three gardening sections; and a public education section. 125 officials and 800 workers work with a budget of 101.5 million Baht.

In addition, the Office of the Secretary is responsible for the administration of the department and includes an administrative section, a personnel section, and a finance section, and operates with a budget of 4.8 million Baht to support a staff of 40 officials.

Detailed facilities utilization rates for the divisions are recorded for use in the budget process to show the current and projected demand for services. The process basically is responsive to the directives of the BMA master plan, and has grown at the rate of about 1-2% per year. For 1988, the Governor is requesting 355.3 Baht for social services and development, which is 6.5% of the proposed BMA budget.

While the budget process follows generally the master plan, interviews revealed that it is possible to bypass the normal budget process (i.e., clearance by the Budget Division, Office of the Permanent Secretary) by appealing to the deputy governor responsible for social services for special projects not in the master plan, such as a new football field. If the governor approves of the project, the budget will be authorized to receive funding. Apparently this "informal" budgeting process was more prevalent prior to the present Governor, but still exists to some extent today.

The interviews also revealed a problem of delay in the budget allocation process. While the fiscal year runs from October to September, those interviewed emphasized the fact that the funds for service programs are available from December to August, because funds authorized for the fiscal year, which are supposed to be available October 1, generally are not available until December 1, a delay of about two months. Also, by August 1, all budget requests for the next fiscal year have to be submitted to the budget office, which apparently causes problems in accessing funds toward the end of the fiscal year.

As can be seen in the budget figures, the priority activities of the department are in the areas of recreation (52% of the budget) and public parks (39%), with the social works services a decidedly lower priority (6.3%). Most of social work service emphasizes short-term emergency and crisis intervention assistance; longer-term assistance stresses case conferences designed "... to teach them how to make their lives better." For example, family assistance includes vocational support, pre-school for children, milk for babies, and clothes for children. Income subsidy programs, either long- or short-term, do not exist as part of the social welfare system. Instead the approach is emergency intervention to meet short-term needs, such as food or clothes, and then longer-term assistance to develop the basis for individual self-sufficiency.

For the last 12 years, the department has also been responsible (jointly with the National Housing Authority) for implementing a "slum upgrading" program for the city of Bangkok. The BMA and the NHA will continue to share responsibility for the program, with NHA concentrating on construction of new housing (a minimum of 22,000 new units in the 1987-1991 period, according to the central government six year plan), and BMA's Social Welfare Department responsible for socioeconomic aspects of the program.

The central government calls for slum upgrading eventually to be the sole responsibility both programatically and financially of local government.

There are about 400 slums spread across the 24 districts of the BMA, ranging in size from 21,492 families in Phra Khanong (District 10) to 170 families in Lat Krabang (District 15), with an average size across the districts of about 4,900 families. The plan for the department, based on an annual budget of about 2 million Baht for slum upgrading, is to concentrate on developing services for 40 slums per year (about 10%) , and to provide for the basic needs of the residents of another 40 slums.

One of the needs identified in our interviews was for assistance in community organization and development. Social workers attempting to develop services in slum areas have been frustrated in trying to get community residents to assume a responsibility for community organization and development. According to staff interviewed, a widespread attitude of "not wanting to get involved" among the slum residents is a real barrier to community change. Department staff are experimenting with the use of community volunteers, who are paid a small stipend, to provide very basic, primary health care and counseling to slum residents. According to these staff "... we don't need more money or personnel. We need assistance and training in community organizing, so we can help these people to help themselves."

CHAPTER VI: CONCLUSIONS AND RECOMMENDATIONS

Although the period for conducting this review of the finance and management of the BMA has been limited to three weeks, the team has the advantages of an external viewpoint and being able to focus on only a few critical aspects of BMA administration. BMA officials have graciously allowed the team to ask the same questions and review similar data from many different parts of the municipality. Thus, the team has had the opportunity to hear similar opinions from many different individuals. Coming from the outside, the team has been able to put together information from different parts of the organization. This opportunity often is not available to BMA officials who are so committed to heavy workloads that they do not have the time to step back and look across the entire administration.

The broadest conclusion is that Bangkok is an impressively successful city. Of course, one cannot escape noticing severe infrastructure problems that affect traffic flow, and investment deficits in water, drainage and flood control are well documented. On the other hand, the present successes of the BMA and its potential suggest that the city has the resources and the capacity to play a significantly expanded role in both the financing and provision of infrastructure and non-infrastructure services. The following conclusions and recommendations, therefore, are intended to help channel the BMA's potential and to suggest alternative approaches to meeting the city's challenges.

The conclusions and recommendations are focused on three themes that were established in the original terms of reference and re-emphasized in the first meeting with senior officials of the BMA:

- The BMA's revenue generation capacity;
- Financial management issues including planning, budgeting, accounting and measuring the productivity of services and improving routine management; and
- Overall organization structure and management.

A. FINANCIAL MANAGEMENT

1. REVENUE ADMINISTRATION

a. Conclusions

The BMA generates revenues through a variety of locally administered taxes, fees, licenses, permits; shared taxes with the RTG; surcharges on other RTG-collected taxes; and direct subsidies from the RTG. Revenues strictly under the control of

the BMA represent about 30% of total revenues. Thus, under present circumstances, 70% of the BMA's revenues are subject to the direct administration and control of the RTG. Shared taxes, most important of which is the vehicle tax, and surcharge taxes, most important of which are business taxes, make up most of this 70%. The importance of that 30/70 split is twofold. First, it is hard for the BMA to control its own destiny unless that disproportion can be lessened. Second, to the extent that the problems in revenue administration occur in the central government-controlled portion, the BMA is powerless to solve those problems.

Two examples illustrate the problem. The vehicle tax is established and administered by the RTG. It is based presently on the cubic centimeter size of the vehicle's engine, and weight is not taken into consideration. Furthermore, the tax is uniform throughout the country. For the BMA, the traffic flows are greater per kilometer of road than any other place in Thailand, and commercial truck traffic carrying heavy loads typically is more concentrated in Bangkok. In not considering these variations, the vehicles tax lowers the marginal economic cost of vehicle operation in Bangkok relative to the rest of the country. That is, public expenditures for roads and bridges have a higher cost per unit, but marginal tax collections are uniform. The second example is the business tax. BMA officials feel that a larger volume of business activity that generates the national tax occurs in Bangkok than BMA receives in its share. Thus, a major share of the revenues for the BMA are not subject to BMA influence and at least may have effects contrary to the public policy of making both the regions economy more efficient (more responsive to market forces) and the BMA more efficient.

The examples slant the case as if the RTG were not aware of the problem and as if there were no compensating factors. In reality, the RTG has several tax reforms affecting municipal revenues under consideration, including the vehicle tax. In addition, even if a particular tax does not seem to be equitable toward the BMA vis-a-vis other parts of the country, the role of the RTG in providing direct services and providing grant subsidies is much higher in the BMA than in other parts of the country. What the examples illustrate is that it is very difficult to evaluate whether the BMA has net gains or losses, and in any case it is not the most direct way of achieving economic and administrative objectives.

The other side of the picture concerns those revenues which the BMA does control. The most significant single local revenue is the house and rent tax. It has two problems. First is the exemption from taxation of owner-occupied buildings. The BMA cannot affect that since the exemption is set by national law. However, the BMA can set the value of the tax base for those properties subject to the tax, and BMA officials acknowledge that their rates are among the lowest in Thailand even though property values in the city are the highest in the country. In addition,

it is commonly acknowledged that only part of the taxes owed to the BMA are actually collected by tax administrators. Thus, there are significant steps that the BMA can take to improve its own financial situation even if changes at the national level do not occur in the short term.

b. Recommendations

The BMA should take immediate steps to strengthen central Department of Finance control over tax administration. This should extend not only to the house and rent tax and land development tax, but also should include the collection of various user charges and fees, such as garbage collection fees. There presently is insufficient monitoring of tax administrators and insufficient record-keeping to allow the BMA to know how much revenue should be collected and where the shortfalls are. Steps that can be taken to change this situation include completing a registration of all property, the characteristics of buildings and their uses, and the placing of fair market values for the rental value (for the house and rent tax) on each liable property. In addition, this step can be aided significantly by even a dispersed system of computers (not electronically linked to a central computer) for maintaining up-to-date records. The mechanism already exists for keeping this system current as building permits are issued, building progress is monitored and finished buildings are recorded into a manual database.

If tax administrators are shifted from their present positions as District officials to the central BMA Department of Finance and rotated among the districts, a greater degree of control over their collection of taxes and fees can be exercised. While the vast majority undoubtedly are honest, some dishonest administration and the lack of training, performance monitoring and technical support cause the BMA to collect considerably less than the revenue that is under its own control. Better administration of existing resources is estimated by the BMA itself to have a potential of an additional 1,000 million Baht per year, a near 20% increase in regular revenues.

Outside the BMA's control are potential changes in legislation. Most important are changes in the basis on which property is taxed, or not taxed. It is a common public policy in many countries to establish a homestead exemption or reduction which means an individual's personal residence is either not taxed or taxed at a lower rate than income producing property or residences beyond a defined homestead size. Intended to help small farmers, it is questionable whether this exemption should apply to urban areas, especially when buildings often are used for both commercial and residential purposes. It would be desirable to modify the present system at least to capture the value of commercial activities being conducted in owner-occupied buildings. If some type of reform is not carried out, property in the BMA will continue to increase in value as a result of BMA

provided services, RTG provided services, and private market activity. Yet the tax system, whether BMA or RTG, will not be recovering the government's costs of providing those services.

Because of the structural problem in taxes levied on property, the final revenue recommendation is to increase significantly the use of beneficiary or user charges to recover at least part of the cost of services which add value to property. This recommendation is consistent with the announced policy of the BMA and the RTG in surveying citizens on their willingness to pay for flood control. It is possible to apply this type of charge in such a manner that individuals are affected based on their economic position, although it is difficult to apply for all services. For example, street improvements are much more difficult to assess based on property values because many more users benefit who do not have property located on or near the improved streets. Nevertheless, some services like flood control and high speed expressways lend themselves quite well to forms of user charges. This form of privatization of service costs is expressed policy within the RTG's Sixth National Development Plan and the BMA's Third Development plan. Given the limitation in present property-based taxes, it also is the most effective in matching the value of location in Bangkok for economic activity with the costs of providing services for that economic activity.

This recommendation to make more extensive use of beneficiary charges should be complemented by an assessment of existing user charges to determine if they are achieving their present purpose. Some fees seem to be levied to recover the cost of the service. Others are levied more to instill a sense of participation on the part of the client, rather than to generate revenue. In the former case, the fee structure in relation to the cost of service needs to be examined to determine what proportion of the cost is intended to be recovered, and fees set accordingly. Some fees now are so low as to be virtually impossible to administer. Officials noted that 4 Baht per month for garbage collection is not worth individuals going to the District office to pay. For fees not intended for revenue purposes, the BMA should insure that the mechanism for collecting is simple and does not add to the cost of the service.

2. FINANCIAL ADMINISTRATIVE SYSTEMS

a. Conclusions

The BMA has made important progress in modernizing its financial planning and budgeting process. This progress is most notable in planning and budgeting for capital (physical and social) investments. There are 27 major capital development programs, and three others are being proposed. These programs

include annual projects that amount to approximately 40% of total BMA expenditures, a rate of investment much higher than many other cities.

The process for identifying individual projects involves inputs from all levels including citizens' suggestions, District officials' knowledge of the problems within their own areas, Department officials' proposals, and of course the elected and appointed executive and legislative policy officials. In addition, the BMA benefits from extensive infrastructure planning efforts generated by its own staff and a host of RTG and foreign assistance agency teams. All annual investments must be consistent with the BMA Third Development Plan, which in turn must be consistent with the RTG Sixth Development Plan.

Individual projects proposed for inclusion in the annual investment budget are evaluated centrally in a sophisticated ranking process that considers financial, social, economic and policy criteria. Final decisions are made through the policy process of the Governor and ratified by the BMA Assembly. The basis on which investment projects are analyzed and ranked is more comprehensive than that of many cities in the world. Some officials, however, feel that financial criteria are not given sufficient weight with the result that many projects do not contain any provision for cost recovery, a problem that limits the capacity to carry out future investments.

The process for examining and evaluating the routine (60%) portion of the budget is not nearly as advanced. A Planning, Programming Budgeting System has been implemented in the Budget Division of the Office of Permanent Secretary and is used to review at the central level all Department and District budget requests. However, there are two limitations to the full use of that system's potential. First is one of management perspective. Second is one of completing the support requirements for the system.

The management perspective problem is a general attitude that the routine portions of the budget are already the minimum necessary funds to carry out the BMA's work. Therefore, one really does not need to question the cost effectiveness or efficiency of routine service provision. Thus, almost all of the detailed decision-making of the budget process focuses on which projects will be included in the investment portion of the budget, and the majority of the budget is routinely approved with average 5% to 10% increases every year.

The routine portion is not without its controls, however. BMA officials point out that there is a very tight RTG limit on growth in the number of personnel, presently set at 2% per year. This limit is set at each level of the civil service so that growing less than 2% at one level does not permit another level to grow greater than 2%. As far as could be determined, the 2% limit applies also to employees, both permanent and temporary, so

that getting around the limit occurs only in extreme circumstances. Given this limit, and the fact that salary levels are determined by national laws, BMA officials feel that they are carrying out more and more work every year, as evidenced particularly by the rising investment budget, with a much lower rate of growth in the personnel to implement those projects. There is clear merit in this view because it does prevent a balloon growth in the routine portion of the budget even without detailed examination of it comparable to the examination of the investment portion.

b. Recommendations

The most immediate activities should be to combine the efforts (not in a structural sense but in a workgroup or task force sense) of budgeting and accounting to develop a uniform classification system for all expenditures. The classification system should extend the higher level categories of the present PPB System to included classification by Department or District section and subsection level as well as PPB branch and should classify every individual line-item into a mutually exclusive object of expenditure set of perhaps ten to fifteen objects. The Branch classification of the PPB System would serve to identify the function, and each expenditure also should reflect whether it is primarily a routine matter or is part of a capital project.

This classification coding system would be the basis on which Departments and Districts and their subunits receive their annual budgets. In addition, the same codes would be entered on every expenditure receipt to enable the accounting system to provide a variety of statements of expenditures according to such interests in actual expenditures versus budgeted for Departments and their subunits, in capital versus current, in personnel expenditures versus other purchases, and so forth. At present, the lack of a complete and consistent classification system makes it almost impossible for the Budget Division to do a complete job of budget review and the Accounting Section to supply financial management information. It should be noted that the present accounting system does already provide a clear audit trail of expenditures and revenues for financial control purposes.

It is difficult to conceive carrying out this recommendation without some degree of automation. The present manual efforts in accounting and budgeting activities are stretched to capacity. However, it would be a mistake to initiate a large study to develop a fully automated, fully integrated management information system at this time. The computing staff of the municipality seem extremely competent and are making progress in automating various municipal functions. However, the full management information needs of the municipality are not well identified and the most appropriate structure for integrating all those needs is not easy to imagine. A large scale effort might take years to implement, if successful at all, and the BMA's needs in the short-run are too critical to wait.

Therefore, it is recommended that the coding and classification of financial information take the first priority, and that it be recorded in a dispersed fashion. That is, individual, small computers should utilize relatively simple to operate software, consistent across every machine, to automate the present tasks of budgeting and accounting, following the to-be-developed classification system. Where information from separate machines needs to be integrated to meet financial control and management needs, in the short-run it can be accomplished by reading the necessary files into a common machine for further summary reporting and analysis. As the BMA gains experience with the classification system and as management has access to more responsive reporting, additional information needs will be identified and a more fully integrated system can be developed on the basis of experience accumulated.

B. SERVICE DELIVERY MANAGEMENT

1. CONCLUSIONS

The main emphasis of the conclusions and recommendations on the management of BMA services is implied in the previous financial management section. If there is little analysis of the routine portions of the BMA budget, it might seem to follow that there is little analysis of how well the Departments and Districts are providing services. However, that inference would not strictly be true. The efforts of the review team in the services area focused on what kind of information managers attempt to collect about the volume of work carried out under their responsibility, the quality of work, the citizens and institutions reached by those work activities, and the efficiency and effectiveness of those services. The counterpart to these questions then concerned how that information is analyzed or used by managers and how it affects their planning, budgeting and organizing for future work. From the previous sections conclusions, one might assume that this kind of information is not sought, except perhaps for investment projects. In fact, that is not the case.

Throughout the BMA, management level officials try to collect detailed information about the clients they serve, their needs, the way BMA services are provided, the quantities, the quality, and how much it costs to do what is being done. Methods range from detailed quantitative counts of the garbage collected by every truck and every crew to every senior manager being required to take a monthly tour of the BMA, or a portion of it, to observe every aspect of city condition and functions possible. A detailed report on this observation tour is required, and separate reports to every official in whose jurisdiction a problem is noted.

Some Departments are more advanced than others in developing workload and other performance measures. Of course, some activities are easier to measure than others. The missing element is the linkage of the information collected and analyzed to planning and budgetary decision-making. Within Departments, and sometimes only within Divisions of Departments, managers make some use of such information to rearrange work, to try to find out why work is below standard, and to justify requests for additional personnel or equipment. However, it is very difficult for this information to cross Departmental or District lines. The organizational hierarchy is strictly followed, and for information to be used in a Department or District other than the one in which it was collected, it has to be passed up the Department hierarchy, across through Deputy Governors, and then down through a Department or the Office of Permanent Secretary to go to a District.

Sometimes this hierarchy may be avoided by informal arrangements. More often, however, the hierarchy is respected and information flow is restricted or at least slowed. Of course, the very act of collecting this type of information and reporting it at all has some effect on the behavior of workers and lower-level managers. Work crews who know their garbage collecting is monitored and District Directors who are aware that their crews may be off the standard often do not need any further intervention to correct the problem. Still, the system of performance management of routine services is incomplete, and seems to be developed mainly on the initiative of some managers.

2. RECOMMENDATIONS

A BMA-wide program of developing performance measures for the work of each level of the municipality should be developed under the sponsorship of the Deputy Governors. This high level management support is essential to make it clear that the program is intended to review the routine operations of the BMA to enable the municipality to provide more services for the funds now being spent or to provide the same services for less cost so that funds can be shifted to development projects.

Based on the extent to which many managers are interested in this approach and are developing some systems within their own areas, this performance management approach need not be a threat to cut budgets or personnel. Rather, since overall personnel growth has been and continues to be limited, the program can be seen as one way to convert some routine functions to investment activities because of greater efficiencies in the routine. Thus, any group whose performance can be improved, or who can improve their own performance, can be rewarded by seeing their efforts allowed to be converted into investment projects. In that sense, no one need perceive the system to be one of winners and losers. Rather, it would be a system for using more technical management techniques to improve routine operations in order to achieve higher levels of capital investment.

C. ORGANIZATION AND MANAGEMENT

1. CONCLUSIONS

The overall organizational structure of the BMA received the least attention from the review team. In part this was due to the relatively greater interest on the part of BMA officials in issues of financial management and service delivery. In addition, so much of the overall organization and structure is set by national law and is responsive to the history and culture of the role of the BMA in the national political system that the review team felt a major focus on structure would not be feasible within the time period for the study. The observations made, therefore, should be prefaced as this entire chapter is prefaced -- as a city the BMA works very well. With that overall caveat, conclusions can be stated on three themes: the horizontal organization of the BMA, its vertical organization, and the BMA's legal authority to improve its organizational structure.

There appear to be some duplications in the horizontal organization of the BMA with similar functions being performed at different locations within the structure. In particular, there seem to be a number of planning units within Departments other than the Department of Policy and Planning. Of course, each Department and District must carry out a degree of planning in order to perform its functions. However, we did note some planning units describing their greatest need as hiring additional planners with different university backgrounds while the specific type of planner needed was working in a planning capacity in a different part of the organization. It is likely that some greater degree of collaboration, or even some moving of personnel, might achieve the desired results without additional staff hiring. This same pattern was repeated in interviews with areas outside planning, which suggests that the personnel needs of individual Departments and Districts are being evaluated from within rather than looking to other parts of the BMA to see if the work can be performed without additional hiring.

The vertical organization of the BMA is very complex. The distinction between District and Departmental responsibilities is not always clear, and even when it is clear, it may not be the most effective. For some major BMA functions, only a Department performs the operational or line service. For example, night soil collection and disposal is the sole responsibility of the Department of Public Cleansing. For the same Department, similar clear divisions between garbage collection (District) and disposal (Department) exist. For other major functions, however, the possibilities for either duplication or gaps in coverage exist. For example, in several areas, the same functions are performed by Departments and Districts with the distinction based on size of the problem. Buildings over four stories are inspected by the Department (Public Works) and under four by

Districts. While there is some reasonable basis due to stricter standards for taller buildings, there easily could be some overall personnel duplication.

Similarly, some activities are divided into District if the problem is solely within one District boundary and Department if the problem cuts across two or more Districts. This sometimes creates confusion and conflict over whose responsibility the problem is. These types of problems are solved more often than not by creating a coordinating group or committee, and sometimes informally. However, Districts report in the hierarchy to the Office of Permanent Secretary whereas Departments exist organizationally at the same level as the Office of Permanent Secretary. The hierarchy must be observed, at least at the formal level. It seems very likely that valuable personnel time is lost coordinating through the layers of hierarchy and through attempting to define ad hoc responsibilities.

Finally, the BMA lacks the authority to revise its own structure to suit the needs of its elected and appointed officials. The RTG controls the formal structure just as it controls the levels, numbers and growth of personnel. None of the problems mentioned in the preceding paragraphs on the organization structure have escaped the attention of BMA officials, but they lack the authority even to make minor structural changes to resolve them. While the RTG is unlikely to give the BMA complete autonomy in many respects, it seems unreasonable for a city of Bangkok's size not to have the authority to revise its organizational structure to maximize operating efficiency.

2. RECOMMENDATIONS

In the absence of authority to change its own structure, the most positive steps the BMA can take to minimize problems with the organization are to reexamine the division of responsibilities between Districts and Departments and to carry out an analysis of the work being performed by personnel across the BMA. The former should take place over time as the PPB System is being more fully implemented, as described in the first section of this chapter. As that System is expanded, and as a service performance management system is developed, measuring the work performance is likely to show where moving some personnel between Departments or between Districts and Departments will increase productivity. A major reorganization study is not recommended because it would place too much emphasis on formal structure, when the work gets done in many cases informally, and in the absence of BMA authority over its structure, such a study would mainly be a waste of resources.

The second step also is not a massive study. The Civil Service Commission already has recommended the development of an automated personnel inventory that includes information on background, training, position, pay and job responsibilities. This system can be developed gradually, and it is one in which

the Computer Center of the BMA can already play a key role. As that system is developed, files could be analyzed to determine, for example, where in the BMA are staff located who are performing the same job. One then could follow up on that analysis to see if there are possibilities for grouping some of those staff. Similarly, the process of looking within the entire BMA to see if a person with a needed job skill is available without hiring would be much simpler.

These minor recommendations to improve organizational structure are lower in priority than recommendations in the first two sections of this chapter. The BMA will be taking on more responsibility for providing and financing both routine and development services under any circumstances. Furthermore, even for its routine operations, the BMA's financial future could be difficult. The present administration and managers seem determined to improve its operations, and it is hoped that the major conclusions and recommendations included here will stimulate the kind of discussion and decision that will lead the BMA to tailor make its own changes.

D. TECHNICAL ASSISTANCE AND TRAINING

Specific training and technical assistance requirements have been identified within the three preceding sections based. In addition, we asked BMA officials in the various departments and divisions to identify what they felt were their most critical training or technical assistance needs. Most officials were eager to advance the technical capabilities of their respective organizational units; Annex 5 presents a summary of the technical assistance and training requirements identified by these officials.

ANNEXES

1. List of References
2. Organization Chart of the Bangkok Metropolitan Administration
3. Revenue Sources, Revenues and Expenditures: Current, Constant and Per Capita Baht
4. Alternative Scenarios for BMA Revenue Growth and Expenditure Control
5. Technical Assistance and Training Requirements of BMA Departments

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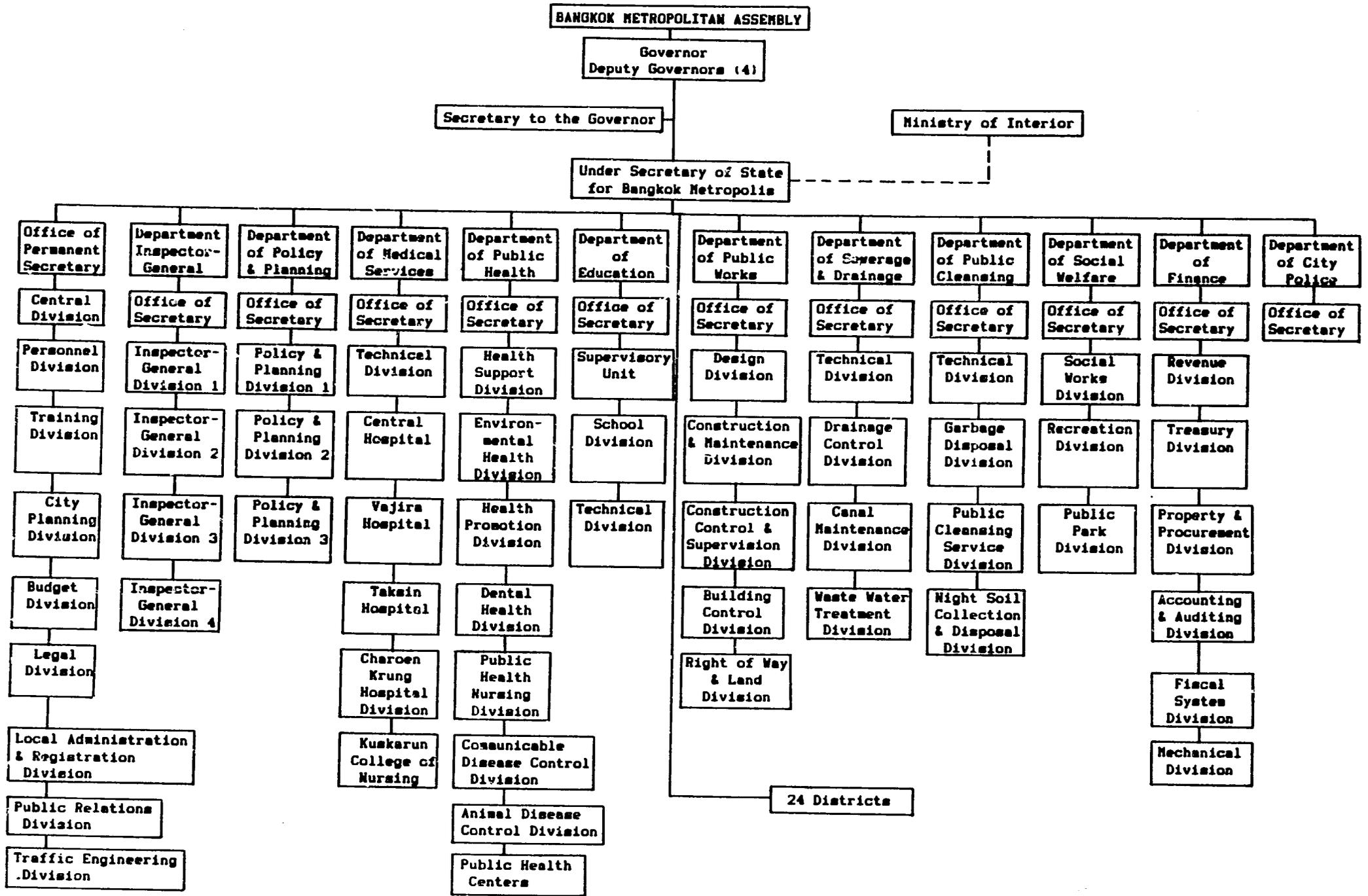
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ANNEX 2: ORGANIZATION CHART
BANGKOK METROPOLITAN ADMINISTRATION



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**ANNEX 3: REVENUES AND EXPENDITURES
BANGKOK METROPOLITAN ADMINISTRATION**

ANNEX 3: TABLE 1 -- BMA REVENUE SOURCES (000'S BAHT)

	ACTUAL REVENUES AND EXPENDITURES			PERCENT DISTRIBUTION		
	1984	1985	1986	1984	1985	1986
REGULAR REVENUE	4,707,079	4,820,008	5,113,931	74.90%	70.73%	82.06%
Taxation	4,087,801	4,038,705	4,263,839	65.05%	59.26%	68.42%
Collected by BMA	825,693	933,587	1,002,835	13.14%	13.70%	16.09%
House and Rent	679,628	776,684	841,830	10.81%	11.40%	13.51%
Land Development	95,080	101,598	102,599	1.51%	1.49%	1.65%
Signboard	44,744	49,045	52,291	0.71%	0.72%	0.84%
Animal Slaughter	6,241	6,260	6,115	0.10%	0.09%	0.10%
Shared Taxes	970,845	1,031,098	1,055,766	15.45%	15.13%	16.94%
Vehicles	959,118	1,018,883	1,051,622	15.26%	14.95%	16.87%
Rice	11,727	12,215	4,144	0.19%	0.18%	0.07%
Surcharge Taxes	2,291,263	2,074,020	2,205,238	36.46%	30.43%	35.39%
Business	2,101,071	1,884,040	1,970,873	33.43%	27.65%	31.63%
Gambling	88,973	67,105	95,344	1.42%	0.98%	1.53%
Liquor and Beverage	88,957	93,315	92,799	1.42%	1.37%	1.49%
Excises	12,262	29,560	46,222	0.20%	0.43%	0.74%
Local, Non-Tax	112,211	119,842	139,391	1.79%	1.76%	3.04%
Fees, Fines, Permits	112,211	119,842	189,391	1.79%	1.76%	3.04%
Slaughter House	2,282	2,074	1,967	0.04%	0.03%	0.03%
Animal Transfer	459	419	402	0.01%	0.01%	0.01%
Gambling License	2,681	1,962	2,086	0.04%	0.03%	0.03%
Advertising License	256	281	248	0.00%	0.00%	0.00%
Parking Lots	5,057	5,360	5,612	0.08%	0.08%	0.09%
Building Construction	2,261	6,032	13,874	0.04%	0.09%	0.22%
Garbage Collection	17,849	20,544	22,638	0.28%	0.30%	0.36%
Nightsoil Transfer	12,564	10,573	11,551	0.20%	0.16%	0.19%
Fines	34,709	37,770	94,654	0.55%	0.55%	1.52%
Permits	34,093	34,827	36,359	0.54%	0.51%	0.58%
Ice Regis.	104	135	151	0.00%	0.00%	0.00%
Private Mkt.	94	91	87	0.00%	0.00%	0.00%
Trade Operation	24,996	25,588	26,147	0.40%	0.38%	0.42%
Food Shop Regis.	7,746	7,871	8,805	0.12%	0.12%	0.14%
Hair Dressing	103	99	103	0.00%	0.00%	0.00%
Hair Dressing Salon	382	375	357	0.01%	0.01%	0.01%
Cemetery and Cremat.	2	1	1	0.00%	0.00%	0.00%
Advertising	225	214	189	0.00%	0.00%	0.00%
Liquor Sales	441	453	519	0.01%	0.01%	0.01%
Revenue from Properties	377,653	476,722	520,532	6.01%	7.00%	8.35%
Land Rental	338	364	394	0.01%	0.01%	0.01%
Building Rental	4,357	7,195	4,635	0.07%	0.11%	0.07%
Land Maintenance	801	133	57	0.01%	0.00%	0.00%
Bank Interest	369,457	467,993	512,990	5.88%	6.87%	8.23%
Wharf Fees	1,008	792	1,742	0.02%	0.01%	0.03%
Dividends from Printing		82	21	0.00%	0.00%	0.00%
Operational Fees (Slaughter)		1		0.00%	0.00%	0.00%
Stall Rental	143	154	680	0.00%	0.00%	0.01%
Welfare Land	1,536			0.02%	0.00%	0.00%
Fresh Market Rentals	13	8	13	0.00%	0.00%	0.00%

ANNEX 3: TABLE 1 -- BMA REVENUE SOURCES (000'S BAHT)

	ACTUAL REVENUES AND EXPENDITURES			PERCENT DISTRIBUTION		
	1984	1985	1986	1984	1985	1986
Fees from Public Utilities	10,300	8,800	6,300	0.16%	0.13%	0.10%
Bureau Markets	300	300	300	0.00%	0.00%	0.00%
Pawn Shops	10,000	8,500	6,000	0.16%	0.12%	0.10%
Miscellaneous	119,114	175,939	133,869	1.90%	2.58%	2.15%
Printed Matter	103	60	39	0.00%	0.00%	0.00%
Construction Design	11	3	41	0.00%	0.00%	0.00%
Previous FY Return	64,628	128,100	51,457	1.03%	1.88%	0.83%
Sales of Specs. for Bids	8,344	10,949	31,675	0.13%	0.16%	0.51%
Physical Examinations	120	146	234	0.00%	0.00%	0.00%
Photocopying	785	1,020	956	0.01%	0.01%	0.02%
Misc.	45,123	35,661	49,467	0.72%	0.52%	0.79%
PECIAL REVENUE	1,577,130	1,994,770	1,118,000	25.10%	29.27%	17.94%
Central Gov't. Subsidies	1,577,130	1,382,770	1,118,000	25.10%	20.29%	17.94%
Central Fund		612,000		0.00%	8.98%	0.00%
				0.00%	0.00%	0.00%
TOTAL REVENUES	6,284,209	6,814,778	6,231,931	100.00%	100.00%	100.00%

ANNEX 3: TABLE 2A -- EXPENDITURE AND REVENUE SUMMARIES

BANGKOK METROPOLITAN AUTHORITY: EXPENDITURES (000's Baht)

	1984	1985	1986	1987
Public Cleansing and Order	569,670	778,100	573,400	636,060
Flood Prot., Drainage, Sewerage	752,040	715,300	802,500	1,026,590
Administration	1,211,550	1,347,200	1,318,000	1,123,940
Public Works and Traffic	1,216,130	1,339,800	1,949,000	1,419,830
Medical and Health	611,090	610,700	667,100	697,810
Social Welf. and Com. Dev.	167,130	207,100	296,800	343,240
Education	936,120	1,007,900	993,200	1,093,220
BMA Commercial	183,820	253,700	66,300	56,960
TOTAL EXPENDITURES	5,647,550	6,259,800	6,666,300	6,397,650

Note: 1984-1986 are reclassified to fit 1987 classification

BANGKOK METROPOLITAN AUTHORITY: REVENUES (000's Baht)

	1984	1985	1986
REGULAR REVENUE	4,707,079	4,820,008	5,113,931
Taxation	4,087,801	4,038,705	4,263,839
Collected by BMA	825,693	933,587	1,002,835
Shared Taxes	970,845	1,031,098	1,055,766
Surcharge Taxes	2,291,263	2,074,020	2,205,238
Local, Non-Tax	112,211	119,842	189,391
Fees, Fines, Permits	112,211	119,842	189,391
Revenue from Properties	377,653	476,722	520,532
Fees from Public Utilities	10,300	8,800	6,300
Miscellaneous	119,114	175,939	133,869
SPECIAL REVENUE	1,577,130	1,994,770	1,118,000
TOTAL REVENUES	6,284,209	6,814,778	6,231,931

**ANNEX 3: TABLE 2B -- REVENUES AND EXPENDITURES CONSTANT
BANGKOK METROPOLITAN AUTHORITY: EXPENDITURES (000's Baht) CONSTANT BAHT**

	1984	1985	1986	1987
Public Cleansing and Order	569670	759,122	545,770	590,645
Flood Prot., Drainage, Sewerage	752040	697,854	763,831	953,291
Administration	1211550	1,314,341	1,254,491	1,043,690
Public Works and Traffic	1216130	1,307,122	1,855,086	1,318,453
Medical and Health	611090	595,805	634,955	647,986
Social Welf. and Com. Dev.	167130	202,049	282,499	318,732
Education	936120	983,317	945,342	1,015,163
BMA Commercial	183820	247,512	63,105	52,893

TOTAL EXPENDITURES

Note: 1984-1986 are reclassified to fit 1987 classification

BANGKOK METROPOLITAN AUTHORITY: REVENUES (000's Baht) CONSTANT BAHT

	1984	1985	1986
REGULAR REVENUE	4,707,079	4,702,446	4,867,513
Taxation	4,087,801	3,940,200	4,058,383
Collected by BMA	825,693	910,816	954,513
Shared Taxes	970,845	1,005,949	1,004,893
Surcharge Taxes	2,291,263	2,023,434	2,098,977
Local, Non-Tax	112,211	116,919	180,265
Fees, Fines, Permits	112,211	116,919	180,265
Revenue from Properties	377,653	465,095	495,450
Fees from Public Utilities	10,300	8,585	5,996
Miscellaneous	119,114	171,648	127,618
SPECIAL REVENUE	1,577,130	1,946,117	1,064,128
TOTAL REVENUES	6,284,209	6,648,563	5,931,641

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**ANNEX 3: TABLE 2C -- REVENUES AND EXPENDITURES PER CAPITA
BANGKOK METROPOLITAN AUTHORITY: EXPENDITURES (per capita)**

	1984	1985	1986	1987
Public Cleansing and Order	106.32	139.90	99.32	106.14
Flood Prot., Drainage, Sewerage	140.36	128.61	139.00	171.31
Administration	226.12	242.22	228.29	187.55
Public Works and Traffic	226.97	240.89	337.59	236.93
Medical and Health	114.05	109.80	115.55	116.44
Social Welf. and Com. Dev.	31.19	37.24	51.41	57.28
Education	174.71	181.22	172.03	182.43
BMA Commercial	34.31	45.61	11.48	9.50
TOTAL EXPENDITURES	1054.03	1125.49	1154.69	1067.58

Note: 1984-1986 are reclassified to fit 1987 classification

BANGKOK METROPOLITAN AUTHORITY: REVENUES (per capita)

REGULAR REVENUE	878.50	866.62	885.80
Taxation	762.92	726.15	738.55
Collected by BMA	154.10	167.86	173.70
Shared Taxes	181.19	185.39	182.87
Surcharge Taxes	427.63	372.90	381.97
Local, Non-Tax	20.94	21.55	32.80
Fees, Fines, Permits	20.94	21.55	32.80
Revenue from Properties	70.48	85.71	90.16
Fees from Public Utilities	1.92	1.58	1.09
Miscellaneous	22.23	31.63	23.19
SPECIAL REVENUE	294.35	358.65	193.65
TOTAL REVENUES	1172.85	1225.28	1079.45

**ANNEX 4: ALTERNATIVE SCENARIOS FOR REVENUE
GROWTH AND EXPENDITURE CONTROL
BANGKOK METROPOLITAN ADMINISTRATION**

ANNEX 4

BANGKOK METROPOLITAN AUTHORITY: ALTERNATIVE BUDGET SCENARIOS 1988-2000

Scenario 1: Revenues and expenditures grow at rates proposed for 1988 (.0859 and .0868 respectively)

	1988	1989	1990	1991	1992	2000
Total Revenues	6,968,000	7,566,551	8,216,518	8,922,317	9,688,744	18,732,086
Total Expenditures	6,926,000	7,527,177	8,180,536	8,890,606	9,662,311	18,805,204
Surplus (Deficit)	42,000	39,374	35,982	31,711	26,433	(73,118)

Scenario 2: Same as scenario 1 but RTG subsidies decline to 0 over 5 years

Total Revenues	6,968,000	7,315,925	7,693,738	8,104,004	8,549,512	16,083,286
Total Expenditures	6,926,000	7,527,177	8,180,536	8,890,606	9,662,311	18,805,204
Surplus (Deficit)	42,000	(211,251)	(486,798)	(786,602)	(1,112,799)	(2,721,918)

Scenario 3: Same as scenario 2, but expenditure growth is limited to only .05/yr

Total Revenues	6,968,000	7,315,925	7,693,738	8,104,004	8,549,512	16,083,286
Total Expenditures	6,926,000	7,272,300	7,635,915	8,017,711	8,418,596	12,438,101
Surplus (Deficit)	42,000	43,625	57,823	86,293	130,916	3,645,185

Scenario 4: Same as scenario 2, but minimum assumption of additional 1,000 million Baht revenue gains from improvements in collections and revaluing House and Rent tax base.

Total Revenues	6,968,000	7,649,259	8,389,038	9,192,364	9,731,362	18,368,258
Total Expenditures	6,926,000	7,527,177	8,180,536	8,890,606	9,662,311	18,805,204
Surplus (Deficit)	42,000	122,082	208,502	301,757	69,051	(436,946)

Scenario 5: Combines expenditure growth limit of Scenario 3 with revenue enhancement of Scenario 4

Total Revenues	6,968,000	7,649,259	8,389,038	9,192,364	9,731,362	18,368,258
Total Expenditures	6,926,000	7,272,300	7,635,915	8,017,711	8,418,596	12,438,101
Surplus (Deficit)	42,000	376,959	753,123	1,174,653	1,312,766	5,930,157

Scenario 6: Maintains revenue assumptions of scenarios 4 and 5 with an annual decrease in the growth of expenditures of .005 due to efficiency improvements

Total Revenues	6,968,000	7,649,259	8,389,038	9,192,364	9,731,362	18,368,258
Total Expenditures	6,926,000	7,237,670	7,563,365	7,903,717	8,259,384	11,745,675
Surplus (Deficit)	42,000	411,589	825,673	1,288,647	1,471,978	6,622,583

Scenario 7: Maximum revenue gain of 6,000 million Baht from various collection improvements and national legislative changes plus the expenditure efficiency improvement of Scenario 6

Total Revenues	6,968,000	9,315,925	11,865,538	14,634,162	15,640,611	29,793,118
Total Expenditures	6,926,000	7,237,670	7,563,365	7,903,717	8,259,384	11,745,675
Surplus (Deficit)	42,000	2,078,255	4,302,173	6,730,445	7,381,227	18,047,444

**ANNEX 5: TECHNICAL ASSISTANCE AND TRAINING REQUIREMENTS
BANGKOK METROPOLITAN ADMINISTRATION**

EXHIBIT VI.1
SUMMARY of ASSISTANCE NEEDS AS IDENTIFIED
by BMA OFFICIALS

Department/ Division	Type of Assistance			
	Technical Assistance	Computer or Information	Additional Personnel	Training
Office of the Permanent Secretary:				
Personnel Div.	Help in preparing 3-year Manpower Development Plan	Computerized Roster of Personnel and Applicants		
Training Div.	Training equipment Training Advisor	Computerized Recording and Tracking of Training Information		
Budget Division	Help in implementation of PPBS coding system	Programmers to computerize PPBS		
Department of:				
Inspector General	Help in implementation of inspection information system	Information system	Additional unit to conduct performance analyses	Training in use of performance measurement
Policy and Planning	Evaluation Analysis		Engineering capability to evaluate projects	
Public Health	Help in community organizing	Medical information system	Technical personnel to operate advanced equipment	Training in specialized surgical procedures
Education	Assistance in improving academic programs Facilities & Equipment			
Public Works	Help in developing a traffic control data base	Information system and Roads inventory Buildings information system		
Sewerage and Drainage		Computer center and data base	Mechanical division conduct own work	
Public Cleansing		Computer to analyze garbage collection measures		
Social Welfare	Community organizing Legal counseling			
Finance	Help in adapting Accounting system to PPBS	Revenue data collection and system Computerized payroll	Trained Accountants	Training in implementing PPBS
City Police			Inspectors, officers	