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**Analysis
of
Priority Urban Programs**

**Thailand
Urban Strategy Assistance Activity**

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Chapter 1

INTRODUCTION

1.1 Overview

The purpose of this report is to analyze a set of key urban development issues in Thailand in order to assist USAID/Thailand and RHUDO/Asia determine the potential for program activities in these areas for the Country Development Strategy Statement (CDSS) currently being prepared by the Mission.

The analysis contained in this report builds upon an earlier study prepared by the Research Triangle Institute for RHUDO and the Mission entitled Urbanization and National Economic Development: Thailand Urban Strategy Assistance. The study examined the current trends in urbanization and economic growth in Thailand and identified a number of key urban issues that need to be addressed to help Thailand maintain its current high rate of economic growth as it completes the transition to an "Advanced Developing Country" (ADC).

The study identified six key areas in the urban sector where USAID assistance would be most effective:

- 1) Upgrading the Urban Labor Force. Although Thailand has developed a successful primary education program, its secondary and vocational school systems are not well equipped to meet the demands of the modernizing economy.
- 2) Strengthening the Policy and Institutional Base for Financing Urban Services. Thailand's local governments need additional resources for upgrading infrastructure. The long term need is to strengthen the financial institutions within Thailand to mobilize domestic savings for urban infrastructure investment as well as to increase local government capacity for local cost recovery.
- 3) Developing Mechanisms for Urban Environmental Protection. Thailand currently has no effective program for urban environmental protection. Failure to recognize the economic value of its environment has led to chronic under investment in environmental control and lack of regulation.
- 4) Improving Institutional Performance of Infrastructure Agencies in Land Use Planning, Municipal Water Supply, Transportation and Flood Control. The rapidly growing urban economy is increasingly outstripping the supply of urban services. Infrastructure agencies exhibit major deficiencies in physical and financial planning and coordination.

- 5) Using the Housing Sector to Help Distribute and Sustain the Gains of the Economy. The private housing industry in Thailand has been very successful in expanding the supply of housing to progressively lower income groups and has served as a modest engine of growth in the current economic boom. The housing sector needs selective support to enable it to maintain the current momentum, continue to expand beyond Bangkok and adjust to the inevitable downturn in business cycles.
- 6) Strengthening the Institutional Network for Urban Policy Research and Training. While Thailand has good professional resources in the field of urban development, those resources are scattered among a number of institutions and there is no central network or focus for the study and communication of urban issues.

These six areas were presented and discussed with RHUDC and USAID Mission staff. On the basis of these discussions, four areas were selected for additional analytical work and development of detailed program designs (with some rearrangement of components of the original six). The four priority areas include:

- 1) Financing urban development - (a) national policies that affect the availability of funds for capital and operating costs of urban services and (b) mechanisms for mobilizing domestic financial resources for capital investment (including housing) in urban areas.
- 2) Strengthening institutional performance in delivering urban infrastructure services with particular attention to private provision of public services as well as improved public sector agency management in (a) water supply and sewerage, (b) transportation (roads and mass transit) and (c) flood protection.
- 3) Developing mechanisms for providing urban environmental protection on a self sustaining basis including: improved public awareness, improved financing, and improved technical capacity.
- 4) Strengthening institutions in urban research and training with respect to (a) training and research capacity within Thai institutions, (b) potential linkages with U.S. centers of excellence in urban affairs and (c) information base for policy research and analysis.

These four program areas constitute the focus of this report. Chapter 2 presents a detailed analysis of the current situation and trends in each of these four areas as well as the potential clients for improved performance. A strategy for USAID support is presented along with more detailed descriptions of the proposed program components.

Chapter 3 ties the four programs together in a proposed urban strategy for USAID/Thailand and relates that strategy to the CDSS development now being carried out by Mission staff. It should be noted that the program options presented in this report are intended to be comprehensive and undoubtedly go beyond the resources of USAID for funding support. It is the understanding of the authors of this report that RHUDO and USAID Mission staff will select some portion of the range of program options (either whole program areas or components) for inclusion in the CDSS.

1.2 Meeting the Needs of an Advanced Developing Country

Thailand is rapidly moving into the status of an "Advanced Developing Country" (ADC). This transition presents a set of needs to AID and the donor community at large which are different from the needs of Less Developed Countries (LDC's). Thailand exhibits many of the characteristics that are peculiar to ADC's:

- Shifting in the structure of the economy away from reliance on resource extraction activities (agriculture, forestry, mining) to more dependence on urban based industry and services (with a rapid rise in the proportion of GDP produced in urban areas);
- broadening of the economic base with many more types of economic inputs produced locally and export industries shifting toward higher value added goods;
- decreasing dependence on a single industry, or export, for economic growth and foreign exchange earnings;
- increasing growth and importance of secondary cities in the economic system of the country coupled with an increasing complexity of economic activity in secondary cities;
- increasing demand for specialization in skills of the workforce and increasing demand for a workforce with flexible skills and ability to be retrained;
- rapidly rising wages and disposable income which translates into increasing demand for consumer goods;
- broadening (and increasing sophistication) of the domestic financial system and increasing linkages (at all levels) between domestic and foreign financial networks, including capital markets;

- increasing reliance on non-concessional borrowing from foreign banks and increasing proportion of total borrowing accounted for by the private sector;
- increasing demand by the public for higher quality public services, better management of service agencies and increased willingness to pay for higher quality services;
- rapidly growing private sector and increasing use of private sector firms by public sector agencies in the delivery of public services;
- increasing decentralization of the provision of public services from central government ministries to lower level local governments and increasing reliance on user charges to pay for municipal services;
- expanding the pool of local professional expertise and increasing reliance on local experts to replace foreign consultants in both government and private sector work;
- increasing quality and timeliness of data used by government policy makers as well as more sophistication in the policy instruments employed;
- deteriorating urban environment and growing public awareness of the need for pollution controls; and
- shifting in foreign donor concerns from the content of individual projects to the building of sustainable institutions that will outlive donor support.

Thailand exhibits most of these ADC characteristics with some unique aspects. For example, while Thailand's urban areas are growing at about twice the rate of the total population overall, a much smaller proportion of Thailand's total population currently lives in urban areas than is the case in other similar Asian countries. On the other hand, Thailand has one of the most skewed distributions of urban population anywhere in the world with about 2/3 of the urban population of the country concentrated in Bangkok.

The importance of Thailand's urban centers (especially Bangkok) in the economic growth of the country should be a key consideration of USAID assistance. As Thailand's population becomes increasingly urban, and its economy much more urban-centered, the importance of maintaining an adequate infrastructure and service base becomes critical. Indeed, evidence already indicates that problems in the provision and financing of urban infrastructure (which are now inadequate and are falling further behind demand) will likely undermine Thailand's strong economic growth if not corrected soon.

Major weaknesses in Thailand's physical and institutional infrastructure remain the major impediment to ADC status. Unless these institutions are dramatically strengthened, they will not be able to sustain the opportunities for private sector growth and the claim for ADC status will remain a premature designation.

1.3 Program Design Considerations

The selection of the four program areas for USAID's urban assistance strategy has incorporated several considerations which also carry through in the detailed design of the program components. There are several key considerations:

- The target areas should be strongly related to economic growth. While other factors are considered important, AID is committed to assisting Thailand maintain its current strong economic growth.
- The programs should address key policy issues. AID assistance in Thailand has long supported development of national policies keyed to economic growth. Assistance in the urban sector should continue this commitment with particular attention to the implementation of policy.
- The programs should build institutional capacity and financial sustainability. The programs must be concerned with the institutional structure that supports urban services and infrastructure; this includes the financial structure as well as the management of service delivery agencies with a strong focus on mobilizing domestic savings for urban investment.
- The programs should rely increasingly on Thai expertise. AID's overall programming is moving to an increasingly Thai-U.S. professional partnership. In the urban sector AID should determine the strengths and weaknesses of Thai urban development efforts and develop a strategy which complements those efforts.
- The programs should expand linkages between U.S. and Thai organizations. An important aspect of AID's assistance activities with ADC's is the fostering of linkages with U.S. professional, business and academic organizations in order to facilitate economic and cultural relationships beyond the life of the USAID program.

Chapter 2

POLICY AND PROGRAM OPTIONS

This chapter presents detailed descriptions of the four program options, including discussion of the current situation and trends, key institutions, important policy issues, clients for AID program interventions and descriptions of the program components. Each of the four program areas is presented in sequence:

- 1) Urban Development Finance
- 2) Urban Infrastructure Management
- 3) Urban Environmental Protection
- 4) Urban Policy Research Institutional Support

2.1 Program Area: Urban Development Finance

The area of urban development finance covers two principal sub-areas:

- municipal services financing and
- housing finance

The following discussion treats each of these areas as separate components.

2.1.1 Current Situation and Key Institutions

Trends in Municipal Services Financing

Despite very large investments in municipal infrastructure and services over the past decade, there are still substantial deficits in urban infrastructure especially in the Bangkok Metropolitan Region (BMR). The most critical deficits are found in those services that affect economic growth:

- transport (roads, public transport and ports)
- communications
- electricity
- water supply, sewerage and flood control

Much of these infrastructure services is provided by State Owned Enterprises (SOEs) which have relied heavily on foreign borrowing over the past decade for capital investment funds. The restrictions placed on foreign borrowing since 1985 have lowered the level of overall capital investment in infrastructure in the BMR to a level below that needed to keep up with the current economic expansion.

While the SOE's are mandated to be financially self supporting through user fees, RTG has provided a "safety net" of subsidies while controlling, in an ad hoc fashion, the fee schedules. The result has been a variable financial performance characterized by a series of mounting fiscal crises followed by government interventions to raise fees and/or provide bail out subsidies to cover the accumulated operating losses. This has also tended to provide inadequate funds for capital investment for system expansion and rehabilitation.

There has been limited involvement of the private sector in "formal" service delivery outside of construction contracting. The Bangkok Metropolitan Transit Authority (BMTA) has probably made the most extensive use through leasing arrangements and privatizing certain bus routes in the city. Informally, the private sector actually provides a considerable amount of services to fill the gaps left by government agencies. Approximately half the water supply in the BMR is provided privately, mainly through wells and housing development distribution systems.

The RTG provides most of the financial support for services delivered by municipal governments, both for capital investment and for operating expenses. Currently it is estimated that about 70% of infrastructure investment in urban areas comes directly or indirectly from the central government. In addition, municipal governments (and the BMA) get almost 2/3 of their total operating budgets from centrally collected taxes (with shared taxes and tax surcharges comprising the largest amounts.)

RTG official policy is to shift the financial burden progressively from the central government to local governments and service beneficiaries. However, little is being done to assign greater revenue authority to the local governments, although there are some limited steps being taken to revise local property tax rates and to provide assistance in property tax administration; however, the system of extensive exemptions in the property tax system is not yet being addressed.

The shifting of the financial burden from central to local government carries with it the need for a shift from grant to loan financing of capital investment. The Sixth Five year Plan envisions a increased capital investment burden on the municipal governments (excluding BMA) that would be equal to almost the total amount of their entire "regular revenues" (all sources excluding RTG capital investment grants) for the past five years. Managing this increase requires access to a level of debt financing almost ten times greater than that experienced in the past.

Municipal governments have had very little experience in managing debt in the past. The main credit facility open to municipal governments, the MOI's Municipal Development Fund, has been operating at a fairly low level and would need considerable revamping to meet the projected need. While the private banking system is fairly well developed in Thailand (and has served the housing finance needs well recently), the banks have not had much experience in lending to local governments.

Almost all of the urban infrastructure financing undertaken to date has involved foreign borrowing by the central government. The Regional Cities Development Program (RCDP) has initiated its first four participating municipalities into limited borrowing from domestic banks (to cover part of the local government contribution), but the bulk of the RCDP funds have come from World Bank loans and which are to be repaid by the RTG. Other than the experience of the MDF (which is capitalized with contributions from municipal governments themselves) there is no facility for raising capital investment funds domestically.

To expand the level of municipal services, and repay the anticipated new debt, local government revenues will have to increase substantially. While some improvement can be made in the collection yields of the locally collected taxes (notably the property tax), revenue sources of local governments will have to be expanded as well. This is most likely to come from increases in the shared and surcharge taxes collected by the central government. In addition, municipal governments will have to rely increasingly on benefit based levies such as user charges and betterment taxes.

While the RTG subsidizes local municipal services through both operating subsidies (grants as well as shared and surcharge taxes) and direct capital investment, those subsidies are not well targeted to the poor. Indeed, most of the RTG subsidies are so broadly aimed that they benefit almost all service consumers more or less in proportion to the amount of services consumed. Where the RTG attempts to hold down the price of services to benefit the poor, as in bus fares, the principle result has been to undercut financial viability of the service agency and reduce service coverage in general.

Trends in Housing Finance

Thailand has made considerable progress in the housing sector over the past few years by relying on a vigorous private sector. The production of new housing units in the BMR has increased greatly in recent years, now exceeding population growth.

New housing has become more affordable, the result of declining construction costs, smaller house sizes and lower financing costs. Since 1980, the price of the least expensive new housing has dropped almost 60%. This, coupled with rising incomes in the BMR, has increased the proportion of households who can afford housing on the private market to about 65% of all households.

The private sector has led the housing boom, both in the production of units and in the provision of mortgage financing. Currently, private commercial banks hold over 60% of the housing mortgage portfolio.

The Government Housing Bank (GHB) has played a key role by demonstrating the profitability of mortgage financing to lower income markets and in raising capital by offering competitive rates to depositors. The influence of GHB actions on the practices of the commercial banks has greatly leveraged its relatively small capital base (The GHB holds less than 1% of total deposits in the Thai banking system and holds about 18% of the total mortgage lending portfolio.)

Despite the dramatic success of the housing finance system over the past several years, there is reason to speculate that these trends cannot be sustained much longer. Liquidity in the banking system (which made mortgage lending to lower income groups more attractive to the private banks) has disappeared and mortgage rates are now rising. Costs of construction materials are rising as the housing sector must compete with the general boom in commercial and industrial construction. There is also evidence that the housing construction boom may have already saturated some markets in the BMR. This may force some developers into insolvency since the developers (and not the banks) bear most of the financial risk.

The rapid downmarket expansion of the private housing sector in Thailand has caught the public sector off guard. The National Housing Authority (NHA) has constructed units aimed at middle and low income groups and now finds that the private sector has taken over much of its market. The NHA has not demonstrated that it can compete with the private sector in terms of costs or efficiency so its role in the sector is increasingly in question. At the same time, there is clearly a sizable segment of the population that cannot afford to purchase private housing solutions and rentals and employer housing will have to fill the gap.

The housing sector has served as one of the engines of growth in the current economic boom. Since the Thai economy does not need further stimulation at present, we are interested in how the housing sector can be treated as a potential counter cyclical force in the economy. To do this requires much better (and more timely) information on performance of key indicators in the sector.

2.1.2 Policy Agenda

A. Municipal Services Financing

There are six main policy issues to be dealt with in financing municipal services. In general, the RTG has developed a sound national policy approach as articulated in the Sixth Five Year Plan; the major work remains to be done in implementing that policy guidance.

Main Policy Issues in Municipal Services Financing:

1. The RTG should maintain its stated policy of shifting responsibility for financing public services from the central government to lower levels of government and to the service beneficiaries. Emphasis now needs to be placed on translating national policy statements into action.
2. In support of Policy Issue No. 1 above, the financing of the capital costs of physical infrastructure facilities should be shifted progressively from grant financing by the central government to loan financing with cost recovery based increasingly on collection of beneficiary charges.
3. The shift to loan financing of capital investments requires the development of greatly expanded credit facilities for municipal governments and public enterprises; the scale of the resource requirements dictates that much of the credit must be generated from domestic savings which means that local financial intermediaries will have to be developed.
4. The system of central government transfers to local governments should be overhauled in order to:
 - (a) better target public subsidies on intended beneficiaries; and
 - (b) remove distortions caused by the transfers (e.g., discourage increased local tax effort or favor new construction over operations and maintenance expenditures).
5. Where central government financial support to local government is used to stimulate local economic development (e.g., financing of municipal markets), such support should not undercut private sector activities.

6. The increased reliance on local financing of public services must be matched with adequate revenue instruments available to local governments. Such instruments should:
 - (a) rely increasingly on benefit-based levies which improve accountability by linking value of services received to level of charges;
 - (b) allow local authorities to generate a sufficient level of revenues to maintain municipal services and cover increased debt; and
 - (c) provide buoyancy in local revenue such that the level of revenues rises in step with the level of economic activity and rate of needed expenditure.

B. Housing Finance

There are seven main policy issues which are central to the continued strong performance of the housing sector and which should underpin AID programming in the sector. At present, Thailand has a booming housing industry, led by private sector housing production and finance but with key leadership provided by the Government Housing Bank. The policy issues all address, in one way or another, the need to strengthen the current system of private sector housing while rationalizing the government's role in the sector.

Main Policy Issues in Housing Finance:

1. It is important to recognize the role of the housing sector in economic growth. In addition to the traditional view of housing as a social service, it also has potential as a stabilizing force in Thailand's current economic boom.
2. The provision and financing of housing should continue to rely primarily on private sector initiatives with the public sector playing key roles in two areas:
 - (a) addressing the needs of those who truly cannot afford private sector housing; and
 - (b) maintaining stability in, and adequate access to, the supply of housing credit.
3. As a corollary to Issue No. 2, the RTG should avoid imposing regulations which unnecessarily inhibit the ability of the private sector to respond to market demand for housing (e.g., overly restrictive building codes, tight credit restrictions, misdirected public housing subsidies). The government's efforts to insure adequate housing for the poor should not introduce unnecessary distortions into the private housing markets.

4. The government's efforts to address the needs of groups which cannot be adequately met by the private housing market (e.g., low income groups and squatters on public land) should be:
 - (a) better targeted to those groups; and
 - (b) implemented in a much more cost effective manner in terms of housing services actually provided.
5. The government should work to assure an adequate supply of unsubsidized credit to the private housing sector, removing barriers to the mobilization of domestic savings and, where necessary, foreign borrowing; to facilitate the growth and smooth functioning of domestic housing financial intermediaries, mortgage interest rates should reflect the real cost of credit on domestic markets.
6. The government should also try to assure an adequate supply of credit to the private housing sector outside of the Bangkok Metropolitan Region.
7. Housing finance institutions should have access to reliable market information in order to respond efficiently to market forces.

2.1.3 Clients and Program Options

A. Municipal Services Financing

There are two main groups of program client targets for AID in the area of municipal services financing:

- Policy dialogue clients, and
- institutional development clients.

The Policy Dialogue client targets are primarily RTG decision makers who deal with urban investment planning (NESDB), allocation of revenue raising authority (MOI and MOF), the central government system of transfers (MOI), the operation of credit facilities for municipal governments (OUD, the MDF and MOF) and the provision of technical support to municipal governments (MOI). In addition, the local officials within the municipal administrations are client targets for policy dialogue on improved revenue collection performance and financial management, particularly willingness to assume greater debt and increase tax effort.

Institutional Development client targets comprise those RTG agencies involved with establishment of a financial intermediary for urban investment (MOF, MOI), any candidate institutions such as the existing MDF, and the commercial banking system. In addition, there is a need for strengthening institutions that provide support to municipal governments in the financial management area, including training organizations of the MOI (IGALD) and the OUD.

To address these target audiences, we recommend a set of three program components:

- 1) Policy analysis support;
- 2) Financial Intermediary Institutional Support; and
- 3) Technical Support for Immediate Performance Improvements.

Component 1: Policy Analysis Support

There are a number of critical policy concerns in the area of urban services financing which require ongoing study. It should be emphasized that we are not advocating academic dissertations but rather continuous analysis, frequent dissemination of results and, above all, public debate.

The main issues on which policy analysis would focus include:

- (a) The allocation of financial responsibility among levels of government and service users. While RTG has stated its policy to shift the burden from central to local government in general (and has set overall targets in burden sharing for capital investment), there has been little policy debate on the overall structure of local revenue, the dependency of local governments on centrally collected shared and surcharge taxes, and on the proper mix of locally collected revenues (beneficiary charges, property based taxes, other taxes and fees.)
- (b) The technical and financial ability of local municipal governments manage additional debt and their debt-carrying capacity.
- (c) The most effective instruments for revenue collection given the assignment of specific revenue authority. For any given revenue source, there are multiple modes of assessment and collection which have implications for yield and cost efficiency.

- (d) The development of financial intermediaries to channel domestic savings and foreign loans into municipal investments. This requires information and analysis on the need for capital investment funds, the debt-carrying capacity of municipal governments, alternative models for funds mobilization and the strategies by which financial intermediaries can be developed.
- (e) The rationalization of the system of central-local government transfers and the use of such transfers to improve local financial performance.

AID has already supported some policy studies in the area of increasing local revenue generation and applicability of user charges in municipalities (1985-86). In addition, a study of alternative cost recovery mechanisms for urban infrastructure investments is currently in the design stage. These initial efforts should be extended into a more comprehensive, and continuous, program since policy making is a continuous process and circumstances change. Furthermore, it is critical that policy analysis research receive wide dissemination so that policy makers are exposed to the results through more than written reports. This means that the policy research should be linked to training seminars and conferences with high visibility. RHUDO/Asia has initiated a series of annual meetings of key national policy makers in urban development from USAID Mission countries in the region. This could serve as a possible model for Thailand as well as present a forum for dissemination of country specific policy research.

It is important that the policy research be conducted primarily by Thai institutions with high credibility. This links the policy research activities in this program component to the need for building a larger urban development research capability within Thailand (see section 2.4 below).

Component 2: Financial Intermediary Institutional Support

There is a growing need to develop some form of financial intermediary to mobilize domestic savings and channel that credit to urban infrastructure investment. There are several alternative routes that can be taken, ranging from the upgrading of the existing Municipal Development Fund to the creation of a whole new institution or even a dispersed model using the commercial banks. No matter which route is ultimately taken, the RTG could benefit from support in three areas:

- (a) initial selection of alternatives and design of the financial intermediary system. There are a number of different models from other countries which could be examined (the more relevant ones for Thailand being Jordan, the Philippines, Colombia, and newly proposed systems in Nigeria and Madras, India).

- (b) Technical assistance in implementing the design. Thailand has good expertise in the commercial banking sector and good recent experience in mortgage financing. Furthermore, there is a body of experience with the Municipal Development Fund and the recent experience of the RCDP and participating local banks. This needs to be supplemented with expertise in debt management at the local level and the management of a municipal credit facility.
- (c) Initial capitalization of the intermediary. While the long term purpose of the financial intermediary is to mobilize domestic capital, it will require substantial capital at the beginning. There are a number of options, including acquiring the capital of the Municipal Development Fund, receiving some of the RTG transfers to municipal governments and foreign loans. The capitalization plan should be part of the original design of the system (see (a) above.)

AID has supported a limited feasibility study of the potential for financial support via a HG loan to the MDF (1987); the proposed program component would build on that interest, providing a much more extensive commitment in institutional support.

Component 3: Technical Support for Immediate Performance Improvement

As the RTG moves forward on policy debate and examination of alternatives for capital financing of urban infrastructure, there is a continuing need for technical support to various components of the existing system. Indeed, much can be done to improve the performance of the existing systems and place any future systemic changes on a sounder operational base. Key areas of need in the near future include:

- (a) Improving performance of the local property tax systems;
- (b) improving performance of the management of urban services, including cost controls;
- (c) improving the training of municipal staff in urban services planning and management; and
- (d) as municipalities take on debt financing of infrastructure programs, they will need assistance in debt management, project feasibility analysis, cash flow management and related issues.

AID has already initiated activities in some of these areas. A major effort is underway to develop performance measures for municipal governments which will be used to improve overall urban services management as well as provide information for a performance based central government grant system. In addition, a study on improvements to property tax administration is proposed.

Other donors have also concentrated activities in this area, primarily through the Regional Cities Development Program (RCDP). This has included some work in property tax computerization, guidelines for infrastructure planning and analysis of municipal revenue performance. A large gap in the current assistance efforts is in the area of training of municipal government staff, outside of the project related training provided by the RCDP to participating cities.

B) Housing Finance

In the housing finance area, AID programming should be focused on policy dialogue clients and training clients.

Policy dialogue is aimed at first maintaining the current policy directions and avoiding the reemergence of excessive government regulation which has undercut the private housing sector in the past. The key audience for this level of policy dialogue is comprised on the top decision makers in the Cabinet and national planning (NESDB) as well as the NHA, GHB and private sector interest groups (Association of Realtors). Second, policy dialogue in the housing sector should focus on defining appropriate roles for the public sector, especially the NHA and GHB. Third, policy assistance in the sector should be aimed at strengthening the base of information on key indicators so that the performance of the sector can be monitored closely and information on key indicators such as credit supply and demand can be made readily available. The audience for this information is the mortgage financing institutions, the financial regulators (BOT and MOF) and the private housing developers.

The audience for training is comprised of two groups: private developers and housing finance institutions. We propose that AID assistance in training be focused on improving the financial management and market analysis practices of housing developers and on strengthening the internal management of mortgage financing institutions.

To address these target issues and audiences, we recommend two program components:

Component 1: Housing Finance Training

Component 2: Policy Information Base Support

Component 1: Housing Finance Training

There is a need for targeted short term training consisting of three general types:

- (a) Training seminars for managers and staff of mortgage financing institutions to allow them to keep up with the growing sophistication in housing finance. Illustrative topics might include: alternative mortgage instruments, access to capital markets, portfolio management, long term debt management.
- (b) Training seminars for private housing developers that will help them improve the long term financial viability of their operations. Training topics include: housing market analysis, demand forecasting, land assembly, cash flow management.
- (c) Policy seminars to maintain flow of communications between private developers and RTG policy makers and to review trends in housing sector and housing finance as necessary. This will be linked to information produced by the housing finance information base discussed below.

Component 2: Policy Information Base Support

As the housing finance system grows larger and more complex, there is a need for a more comprehensive and up-to-date information base on the key variables which include: credit supply, interest rates, mortgage financing institutional performance (market share, default and non-performing loan rates, etc.) housing supply (stock, new construction, conversion and obsolescence), housing production capacity, housing demand by market segments, construction costs, land availability and costs.

Since the GHB has assumed a leadership role in the housing finance arena, it would be logical that GHB take the lead in developing and maintaining such a system with AID assistance.

2.2 Program Area: Urban Infrastructure Management

2.2.1 Current Situation and Key Institutions

The major deficiencies in urban infrastructure are concentrated in the Bangkok Metropolitan Region (BMR) where rapid economic and population growth have outstripped the ability of the infrastructure agencies to keep up. Major problems are occurring in the areas of: piped water supply, roads, public transport, drainage systems, sewerage and telecommunications.

In the area of water supply, it is estimated that about half of the households in the BMR are not covered by the piped water supply network but rely on ground water pumping which exacerbates the ground subsidence and flooding problems.

The road network has two major problems: (a) it is poorly configured with an inadequate network of secondary roads and an overall insufficient capacity; and (b) traffic congestion is growing much worse due to a tremendous growth in private automobiles (increasing at more than twice the population growth rate.)

Public transport is plagued by lack of capacity which is especially problematic given the difficulties in overcoming the inadequacy of the road network. In addition, the public bus authority (BMTA) has recurrent financial difficulties caused by a restrictive tariff structure, overstaffing and a lack of investment capital.

Flooding will remain a problem until the flood control works are completed and ground water pumping can be replaced by the piped water network. Although progress is being made on both, the existing deficits are so large that it will be years before the gap is closed substantially.

There is no sewerage system in Bangkok although plans have just been announced to begin a system on a zone by zone basis within the city core (see Section 2.3 Urban Environmental Management for more discussion).

The inability of infrastructure agencies to meet the growing demands in the BMR are the result of four major problems:

- (1) Poor land development controls and planning (which particularly affect road and drainage networks);
- (2) inadequate management of some of the service delivery agencies;
- (3) inadequate financial structure of infrastructure agencies; and
- (4) inability to use the private sector effectively to provide infrastructure services.

Poor land development controls allow urban growth to occur in a haphazard fashion, not allowing for adequate infrastructure to be constructed in advance of new development. Furthermore, new urban settlement in the BMR tends to be located inefficiently in a "leap frog" pattern making the costs of extending infrastructure higher than need be. The nature of land development (stemming from existing patterns of land ownership) has resulted in inadequate road networks since new land development is not tied to the parallel development of the thoroughfare system.

Since publicly provided infrastructure is not available to meet the needs of new land development, these services are provided by the private developers. However, the level of services is often not up to standard nor well integrated with existing infrastructure networks. Small land developers may not provide any infrastructure at all.

A major problem in improving the land development process is the myriad of government agencies that deal with the process within Bangkok. The following agencies have a role in the planning and/or regulation of land development in the BMR:

- the Department of Town and Country Planning within MOI (prepared structure plans for all municipalities);
- the Lands Department within MOI (regulates land transactions);
- BMA Department of Public Works;
- Municipal and provincial governments of the surrounding suburban areas;
- RTG Department of Highways;
- Expressway and Rapid Transit Authority;
- MOI Department of Public Works;
- NHA; and
- NESDB (which prepares investment plans for BMR).

The proliferation of agencies that have an interest in land development in the BMR makes coordinated action all but impossible. In addition, a large amount of land within the BMR is actually owned by public enterprises and the RTG. A recent survey by NESDB estimates that 43% of all land within the Bangkok city core area is publicly owned. Therefore, land development in the BMR involves other public agencies extensively as land owner/tenants in addition to the governmental regulatory bodies.

Inadequate management of infrastructure agencies has been the result of many factors, most of which lie beyond the control of the agencies. While most of the infrastructure agencies are mandated to be financially self sufficient, they are constrained by RTG tariff setting on the one hand and strong employee unions on the other. Coupled with the lack of land development controls and no real coordinated planning among service agencies, infrastructure agencies have adopted a crisis management approach which lurches from one crisis to another.

Despite their self financing mandate, infrastructure agencies tend to respond more to dictates of the central government than to the demands of their service consumers. This lack of consumer responsiveness leads to management deficiencies since cost consciousness and price competition are largely absent. This is also exacerbated by the practice of overstaffing and high wage scales that give the infrastructure agencies excessive personnel costs and generally poor worker productivity (when compared to the Thai private sector). The RTG has attempted to enforce cost controls by uniformly capping staff growth and restricting borrowing — both rather blunt instruments of cost containment.

One of the contributing factors to poor management of the infrastructure agencies is the poor financial structure. Constrained by centrally set tariffs, service delivery agencies tend to exist precariously on the brink of financial ruin. Faced with periodic financial crises, the RTG adjusts tariffs on an ad hoc basis and provides both "bail out" subsidies and new investment funds. However, the underlying financial structure is almost never fixed to prevent the crises from recurring.

The RTG has adopted strict controls on foreign borrowing which has affected the expansion of infrastructure networks since the infrastructure SOE's have relied extensively on foreign borrowing for capital investment funds. The heavy reliance on foreign borrowing has been at the expense of developing domestic sources of capital. The RTG is now trying to redress this by both tapping domestic bond markets and proposals to sell shares in some SOE's (in effect swapping public debt for private equity.)

While the SOE's rely on user charges for revenue generation, the municipal governments have virtually no history of direct cost recovery from beneficiaries, even for services that are appropriate for such charges. At the same time, the RTG envisions that municipal governments will assume a much greater share of the responsibility for financing capital investment in urban areas in the future but has not allocated new or expanded revenue sources to municipalities.

Because the public sector agencies are so financially and managerially constrained, many public services are actually provided informally by the private sector. The public sector's inability to use the private sector in the formal service delivery system is a major obstacle to improved infrastructure in the BMR.

There is some use of the private sector in selected infrastructure services (quite apart from the informal provision of services that occurs to make up for the inadequate coverage by the formal sector.) For example, the Bangkok Metropolitan Transit Authority (BMTA) leases buses from private owners and has completely privatized some bus routes. BMTA also contracts out bus maintenance to the private sector. Much of this private sector involvement has been forced on BMTA because of restrictive tariff setting that keeps BMTA revenues below what it needs to operate and invest in new equipment.

Increasing privatization of public services has encountered opposition from the labor unions which see it as job threatening. The RTG has moved cautiously on this front and in general only considers privatization where union opposition can be muted.

Review of major service delivery areas reveal frequent situations in which the incentives and in some cases the institutions themselves are poorly structured to fulfill the RTG objective of efficient service delivery. Illustrative examples are provided by looking at situations involving water supply, mass transit, and land development.

Water Supply

As currently operated, the MWA is unable to fulfill its mandate to provide quality piped water to all areas of the BMR. The organization appears to be efficiently managed and performs an adequate job of cost recovery for its existing services but it is unable to expand rapidly enough to meet the needs of the rapidly growing metropolitan area. Analysis of current rates and policies leads to recognition of a perverse set of incentives which run directly counter to stated RTG policies:

- The MWA is assigned the responsibility to extend water supply to all areas of the city but the tariff structure is such that they lose money (and bonuses) each time they extend service into thinly populated areas.
- The Mineral Resources Division (Ministry of Industry) is assigned the task of collecting fees for groundwater pumping but has neither the manpower nor the incentive to do so.
- The delays in providing piped water together with absence of land use planning encourage the use of groundwater (at least as a temporary measure) until piped water is available.
- The cost of groundwater is so low that once capital expenditures are made, piped water from MWA is not competitive.
- Unrealistically low property taxes, together with inadequate land use planning and enforcement and flat rate (one price for all areas of the city) service fees all combine to subsidize urban sprawl and further increase the cost of providing urban services.

While many of these perverse incentives have been recognized, no comprehensive examination has been undertaken of the relevant costs of such policies or the alternatives available.

Mass Transit

While running an annual deficit that exceeds that of all other SOEs combined, the BMTA is still unable to maintain its fleet and the number of busses in service is actually declining at a time when privately owned automobiles are increasing at more than 10% per year.

- The BMTA currently has the authority to prohibit or restrict any potential competitor.
- Bonuses are awarded to drivers, not on the basis of aggregate level of service provided or BMTA revenues, but on the number of riders on their own bus, thus providing them with an incentive to restrict all other service providers.
- Maintenance contracts are paid based on the amount of time the busses are in the shop rather than the amount of time they are on the road.
- Fares for the BMTA are set far too low to cover the cost operating and maintaining the existing bus fleet, much less expanding it to provide better service.
- BMTA's bills from the RTG Petroleum authority are eventually paid out of national general revenue, thus providing an incentive to run up large fuel bills.
- Shortfalls in financing the bus service are made up out of national general revenue even though no other region is so heavily subsidized and every other region of the country is far poorer.
- Major pressure groups for keeping the fares low are dominated by university students and BMTA drivers, both predominately upper middle income groups.

Land Development

Poor organization, coupled with inadequate power and perverse incentives, are probably the most evident in land use control. There appears to be little relevance between land use plans and the actual implementation.

- The organization charged with reviewing property development plans, Department of Lands, is given almost no enforcement powers. It can neither impose fines nor withhold permits or municipal services.

- Organizations with the most at stake in orderly development of land, BMA, MWA, and Highway Department, have almost no say in reviewing or enforcing land development schemes.
- Only large development projects are required to provide services, so developers are given the incentive to develop in small, incremental, largely unserved plots.
- Private land owners, who see their primary interests in preserving the size of their lots, readily become the decision makers in determining road width and services provided.
- Inadequate budgets for road construction lead not only to inadequate roads but major resistance to allowing roads to cross ones land because of inadequate compensation.
- RTG ministries are rarely compensated when land is taken and pay no taxes or fees for their real estate assets. Therefore, transport networks are needlessly delayed and valuable RTG held urban real estate never reaches its highest use.

2.2.2 Policy Agenda

There are 6 major policy issues to be addressed within this program area:

1. The RTG should insure that adequate urban infrastructure is provided to maintain economic growth and that government regulation does not stifle the provision of needed urban services by both private and public sector agencies. At the same time, the government should implement its stated policy that the costs of infrastructure services are borne largely by the beneficiaries.
2. The participation of the private sector should be increased in providing urban infrastructure services, including:
 - (a) direct service provision;
 - (b) financing of service expansion; and
 - (c) subcontracting of components of service provision.

The government should examine the instances where monopoly control over certain services has been granted (either to SOE's or government agencies) to determine if competition would improve the level, coverage and responsiveness of the services.

3. The role of the government in urban services provision should be reoriented to those areas where there is a legitimate public interest and where public benefits are concentrated (e.g., public health and safety) or where private market response is inadequate (e.g., services for the very poor and land development patterns which create excessive costs for the public). This means that the central government should move away from "micro management" of service delivery agencies (e.g., tariff setting, staffing decisions) and concentrate on monitoring overall performance, insuring adequate financing for service expansion, and aiding disadvantaged groups.
4. The RTG should continue to accelerate its policy of making infrastructure agencies self-financing (where practicable) and increasingly responsive to market forces. This will require:
 - (a) more authority to enforce payment of user fees (especially from government agencies);
 - (b) further dismantling of the "safety net" of ad hoc subsidies;
 - (c) where subsidies are justified, shifting them away from preferential treatment of new capital investment over operations and maintenance;
 - (d) allowing public service agencies to provide a range of service levels to respond to differentiated demand and willingness to pay; and
 - (e) allowing service agencies (private, public and parastatal) access to capital investment funds to meet the demand for service expansion.
5. The urban land development process requires sufficient controls to insure that land brought into use has an adequate infrastructure base paid for by the beneficiaries (developers and land owners).
6. In order to meet the needs of adequate controls in No. 5 above, the existing fragmented system of government oversight of land development in the BMR needs overhauling.

2.2.3 Clients and Program Options

There are two main groups of client targets for AID in the area of urban infrastructure management:

- policy dialogue clients, and
- institutional development clients.

In both of these areas, there needs to be a distinct focus on (a) the management of urban infrastructure services, including the role of private sector in service provision and (b) the process of urban land development in the BMR which affects how those services can be structured.

The Policy Dialogue client targets concerning the management of infrastructure agencies are primarily the RTG decision makers who deal with the allocation of service delivery responsibility to SOE's and regulation that restricts access of the private sector (the Cabinet, NESDB). A second level of policy dialogue should be aimed at managers of the infrastructure agencies in the BMR (the SOE's and the BMA) who would have to implement activities and/or coordinate with private firms. In addition, the private sector is a target for policy dialogue insofar as it is not clear to what extent the private sector can, or will, undertake public service delivery (although the limited involvement thus far is encouraging).

In the area of urban land development, policy dialogue must be focused on both streamlining the process of land regulation (which will require Cabinet action and NESDB review) and developing more effective control mechanisms. Since this is such a sensitive issue, the policy dialogue should focus on the main interest groups (real estate developers, landowners) and government agencies which either regulate or directly affect land development in the BMR (BMA, MOI, Land Department, Roads and Public Works Departments, NHA and NESDB).

Institutional Development client targets in the infrastructure management area comprise both public sector agencies mandated to deliver urban public services and private firms than already do, or could, provide those services.

Of the infrastructure services in the BMR, RTI recommends that AID give priority to the transport sector (particularly roads and public transit), water supply and sewerage (see 2.3 below) and waste collection. The transport area is closely linked to the land development issue and both are critical to future economic growth and the housing sector (see 2.1 above). Water supply, sewerage and waste collection are all physically linked systems and are best treated together as a programmatic focus.

In terms of narrowing the programs further, RTI suggests that AID's primary focus be placed on helping those agencies make better use of the private sector. While some attention may be focused on general management improvements of the service delivery agencies, a strong concentration on implementing privatization will give the AID program a central theme consistent both with overall Agency strategy and the priority of the RTG.

In the land development area, the institutional development objective should be the creation of a mechanism to insure that new urban (i.e., serviced) land fits into the system of urban infrastructure. As discussed below, this can be done through regulatory means and/or through direct intervention in the land development process. This means that the clients for AID support in this area will involve regulatory institutions (both legislation writing and implementing) as well as institutions which might assume the intervention role (unspecified at this time).

To engage these clients, we recommend a set of three program components:

- 1) Policy Analysis Support
- 2) Pilot Demonstrations
- 3) Technical Assistance and Training to Infrastructure Agencies

Component 1: Policy Analysis Support

There are a number of policy issues in this program area that require study and communication to government policy makers. Most of these issues require attention that goes beyond single studies to incorporate periodic monitoring and analysis. The major issues include:

- performance of urban infrastructure services (adequacy and coverage);
- impacts and costs of government regulations and interventions in infrastructure provision particularly focusing on tariff setting, monopoly controls, and restrictions on capital facility expansion;
- impacts (including economic, environmental and health costs) of failure to provide water supply at time of occupancy;
- opportunities (and models) for private sector involvement, especially in the areas of water supply, mass transit and waste treatment;
- benefits of government subsidies and the distributional impact of user charge schedules;

- performance and alternative incentives for effective land use controls; and
- alternatives to the current system of land development controls which examines both alternative mechanisms and organizational structure for regulation within the BMR.

In addition to policy studies, training seminars are needed to disseminate the findings among decision makers in Thailand, both government and private sector.

Component 2: Pilot Demonstrations

There are two main types of opportunities for demonstration projects:

- (a) Private sector involvement in infrastructure provision in one or more of the services of (i) water supply, (ii) waste collection, (iii) sanitation (see Urban Environmental Program Area — 2.3), (iv) roads and (v) public transit. AID's involvement could include participation in three sets of activities:
 - feasibility studies of potential private sector participation (involvement of US firms could draw on TDP funds as well as Mission EPD Project funds);
 - technical assistance in the design of services and management of the local firm(s); and
 - capital financing via HG loans or PRE Bureau loans.
- (b) Residential land development undertaken at larger scale and involving more extensive planning and infrastructure networks along the lines of "land readjustment" schemes used in Korea and Japan. AID assistance could be in the form of feasibility studies, technical assistance and capital financing through the HG loan program.

Component 3: Technical Assistance and Training to Infrastructure Agencies

There is a need for technical assistance and training to improve the efficiency of infrastructure agencies in addition to any assistance needed in support of demonstration programs under Component 2 above. As the RTG moves (hopefully) to make the infrastructure agencies and municipal governments more reliant on beneficiary charges, these service agencies will have to become more consumer oriented. They will need assistance in:

- demand analysis and forecasting (including willingness to pay analysis and service pricing);
- personnel management and motivation, including more performance monitoring;
- revenue generation, cost controls and improved financial management; and
- contracting and joint ventures with the private sector.

This assistance will require a combination of training and technical assistance activities. Since much of it involves basic management skills available in the private sector and in management consulting firms in Thailand, maximum use should be made of local Thai firms to deliver this assistance.

In most cases, training activities that take place in Thailand will probably be most efficient. However, there will continue to be some value in carefully selected U.S. based participant training and study tours, as well as some training in regional programs.

In addition, some of the most effective training may involve no more than working with the Association of Municipal Governments (League of Cities) to assist their members to learn more about what is happening in other cities in Thailand. Such a program could serve to both highlight the successes in one municipality as well as enable other local officials to learn from their counterparts.

2.3 Program Area: Urban Environmental Protection

The general tenor of Thai urban policy has been one of overlapping authority, weak implementation, and crisis management. Urban environmental policy is perhaps the prime example. In fact, because the very nature of environmental pollution involves multiple sources and incremental growth of diverse impacts it is extremely difficult to mobilize an effective response because the crisis is rarely seen.

Thai institutions have generally been pretty successful in crisis situations. Where there was a clear and present external threat they have organized well and responded effectively. Unlike most other developing countries, the Thais have effectively resisted colonialism, communist insurgency, racial and religious unrest, and unmanageable international debt.

Where the Thais have been less effective is in combating slow diffuse internal threats. The same traits of diplomacy, tolerance, moderation and accommodation that have worked so well in other areas appear unsuited to the rapidly growing urban needs for environmental management. The accommodative, laissez faire approach that has worked well for business seems to lead to environmental disaster. At the same time, Western and Japanese models with rigid laws and confrontational enforcement seem out of place in Thai society.

2.3.1 Current Situation and Key Institutions

Despite rapid growth in the urban population and the urban economy, there has been almost no investment in urban environmental protection. Industrial and vehicle exhausts are uncontrolled, flooding (exacerbated by groundwater pumping) is chronic, and Bangkok lags behind every major city in Asia in terms of sewage treatment. Government agencies lack the resources to provide vital environmental services and the private sector lacks the incentive. As reflected in the foreign investment location decisions of the past ten years, the Bangkok Metropolitan Region represents Thailand's greatest economic asset and yet little is done to preserve this resource. Ninety percent of new manufacturing investment is built on five percent of the land area and yet no comprehensive plan has been prepared to project their emissions and anticipate the impacts.

The current approach to industrial pollution control is a continuation of laissez faire practice and very consistent with Thai traditional approaches. To minimize confrontation between government and industry over environmental controls, environmental policy responsibility is assigned to the National Environmental Board (NEB) while the Ministry of Industry (MOInd) is given primary responsibility for pollution enforcement. No comprehensive plan of action has yet been developed for financing, training or enforcement.

While large scale industrial activities tend to generate most of the attention, equally if not more serious are the problems caused by the millions of increments of untreated waste from homes, automobiles, and the micro industries that abound in Bangkok. The Chao Phraya river and most of the klongs are reaching septic conditions (zero dissolved oxygen) not because of industry, but because of household, hotel and restaurant waste. Similarly, the major source of lead, carbon monoxide, and ground level ozone in Bangkok is the private automobile.

The general public has been relatively uninvolved in environmental issues, not because people don't care but because they are usually unaware of the of the potential impacts involved or the alternatives available. Where this information has been provided and the public perceived the threat of a direct impact, Thai citizens have mobilized to take what they believed to have been necessary action. Dams, factories, highways and logging have been halted on occasion in response to public protest, but no sustained program has been developed to help the public anticipate long term environmental consequences or provide meaningful input into environmental debates.

Major statutes and institutions related to environmental protection include the following:

STATUTES

- Public Health Act, 1941, regulates the disposal of solid waste and authorizes local authorities to issue bylaws regulating its disposal. The act also authorizes penalties but limits them to 100 baht.
- Poisonous Substances Act, 1967, Amended 1973, divides responsibility for control of poisonous substances among Ministries of Agriculture, Industry and Public Health.
- Factories Act, 1969, empowers the Ministry of Industry to control the establishment and operation of factories but exempts State Owned Enterprises.
- Announcement No. 286 of the Revolutionary Council, 1972 controls housing developments and calls for sewage lines and sewage treatment plants but the regulations have been found to be nonenforceable.
- National Environmental Quality Act, 1975, creates the National Environmental Board (NEB) and authorizes it to formulate environmental policies, develop implementation plans, and coordinate various agencies in matters related to environmental quality. NEB is not, however, given any enforcement powers under this Act.

INSTITUTIONS

- National Environmental Board (NEB) is located in the Ministry of Science, Technology and is chaired by a Deputy Prime Minister. NEB has overall responsibility for policy Development.
- National Economic and Social Development Board (NESDB) is placed in the Prime Minister's office and is the main central planning agency. The Sixth Five Year plan includes the first chapter devoted to natural resources and environment.
- Bangkok Metropolitan Authority (BMA) has departments of drainage, sewerage, public cleansing, and public health within its jurisdiction.
- Municipalities and Sanitary Districts have the duty to maintain and preserve their environment as covered under their responsibility for public health, waterways, and water supplies but their policies and financial resources are under the control of the Ministry of Interior.
- Public Works Department is located in the Ministry of Interior and has responsibility for the design and construction of sewerage and sewage treatment facilities.
- Non Governmental Organizations (NGOs) are beginning to take a somewhat stronger role on environmental issues but to date, most of their attention has been paid to wild life and deforestation rather than urban environmental issues.

There are a number of serious issues which will pose major obstacles to the development of an effective environmental control program in Thailand. While it is commonly said that there is simply a "lack of will" to address urban environmental problems, this issue can be usefully divided into the following elements:

- a) Lack of Financial Resources. Environmental protection, even where performed efficiently is still an expensive undertaking and given the nature and history of the Thai tax system, there is unlikely to ever be sufficient funds in general revenue to cover the costs.
- b) Lack of Technical Expertise. There is already a serious shortage of engineers and technicians in Thailand and those few who are trained are quickly snapped up by the private sector.

- c) Lack of Information. There is a serious shortage of information regarding sources, quantities, concentrations, impacts and ultimate fate of most pollutants. In addition, while there is some effort currently underway (funded by the Japanese) to build an emission inventory, there is no comprehensive program to update this information and interpret it.
- d) Lack of Public Support. While there is some public concern about flooding and deforestation, the interest has generally been limited and short lived. The NGOs lack the resources information, and training to build and sustain public support for stronger pollution control.
- e) Lack of Clear Responsibility and Guidance. Existing legislation is rather comprehensive but the responsibilities are divided among a wide variety of institutions and there appears to be no common plan for implementation.

2.3.2 Policy Agenda

Whether the environmental focus is on industry, automobiles, or domestic sewage; the major shortfall in Thai environmental policy is not the lack of laws, goals or five year plans but the lack of sustainable implementation and enforcement. Environmental programs, because they ultimately draw their support from the general public, rarely can grow much stronger or move much faster than the public awareness upon which they are based. An environmental program capable of dealing with the pollution problems of an ADC requires not only the development of improved control policies but the development of institutions capable of mobilizing adequate public support to sustain them.

There are eight major policy issues to be dealt with in initiating an effective urban environmental protection program in Thailand. These issues are chosen based on the opportunities they offer to address major environmental problems while strengthening technical, public and financial support for environmental control. The major challenge is to build a program which can provide and implement preventive care on a sustainable basis.

- 1) The RTG should expand its efforts to assure that adequate information is provided to the NEB and the public regarding pollutants discharged to the air, water and land, particularly near the major urban areas and critical resource areas. This pollution inventory should be updated regularly and should include (a) the sources of individual pollutants, (b) the quantity and concentration discharged on both a peak hourly and annual basis, and (c) the risk and impacts associated with the pollutants. In order to assure that there are sufficient financial resources to maintain this inventory the major portion of the costs should be borne by a fee paid by the sources

of the pollution themselves. Such a fee should be roughly proportional to the quantity and risk of the pollutant discharged.

- 2) The NEB and other government agencies should share with the public the information gained from the inventories and more effectively involve them in discussions of environmental issues. Furthermore, they should support the efforts of Thai Wildlife Fund and other local environmental NGOs to educate the public regarding the causes and impacts of both domestic and industrial pollution and the alternatives available for control. These efforts should be assisted through the dissemination of information, policy conferences and the use of realistic models to forecast and anticipate the impacts of uncontrolled pollution. The goal throughout is to build an environmental constituency which can ultimately provide constructive criticism and public support for preventive action and hard environmental decisions.
- 3) The RTG should work with the Federation of Thai Industries (FTI) and other business groups to help them recognize that pollution control is integral to development and involve them in the search for cost effective solutions to urban environmental problems. Private industrial expertise is an important resource in any country, but particularly in Thailand where technical training (especially in government agencies) is in such short supply, the solution to pollution must draw primarily on private expertise. Industry must be made aware of the economic consequences of pollution and of the opportunities for cost savings through resource conservation, recycling, and pollution control at point of origin. Industry in Thailand must be recognized not only as a source of pollution but as a critical technical resource which, when given appropriate incentives and flexibility can provide the necessary solutions.
- 4) The polluter should bear the burden of pollution control. Not only does this reduce the drain on government resources but it is generally far more efficient because it provides a continual incentive for pollution sources (both industry and the public) to look for the least costly method of reducing emissions.
- 5) The NEB and Ministry of Industry (MOInd) should focus their primary efforts on the development and implementation of effective incentives and enforcement regulations and should avoid becoming involved in prescriptive technical solutions. Wherever possible the choice and implementation of pollution control techniques should be left to the private sector. The enforcement program should evidence the following characteristics:

- be based on objective measurements of the quantity and concentration of the pollutant discharged,
 - impose a nondiscretionary fee or other incentive on the pollution source to take necessary corrective action,
 - impose minimal interference in the operation of the source, and
 - require minimal technical and judicial involvement.
- 6) The increased reliance on incentives as an enforcement technique must be matched with adequate mechanisms to assure fair, effective, and sustained implementation. Such mechanisms should include the following:
- The nature and quantities of pollution discharged as well the amount and disposition of the fees collected should be a matter of public record;
 - fees per unit of pollution should generally not exceed the public awareness of the problem involved;
 - fees collected should be assigned to the environmental agencies involved with a specific allocation designated for continued public and industrial education, and
 - while fees may initially involve only token amounts, there must be adequate provision for gradually strengthening them in response to new information and increased public support.

The ultimate goal of any incentive system is to promote environmental control rather than raise revenue. Both goals can be reached simultaneously, however, once the fee is high enough to cover the cost of treatment and disposal.

- 7) The RTG should continue and accelerate its recently announced program for sewage collection and treatment. NEB, BMA, and local government agencies should focus primarily on the development of realistic standards and effective enforcement regulations with particular emphasis on assuring adequate cost recovery. Wherever possible, the private sector should be encouraged to take on the tasks of finance, construction, waste collection, treatment and disposal.
- 8) The RTG should adopt a comprehensive program to address the problem of private groundwater pumping. If the sewage treatment program addressed in #7 above is financed through a surcharge on municipal water (as is

commonly done), this will only exacerbate the tendency to pump groundwater. Enforcement measures must be adopted to assure that the cost of ground water approximates the environmental damage to the community. One possible such measure is to impose a flood protection benefit levy with a substantial rebate in return for documented payment of municipal water bills equivalent to estimated domestic usage.

2.3.3 Clients and Program Options

There are two main categories of program clients for AID in the area of Urban Environmental Protection:

- Policy Dialogue clients and
- Institutional Development clients.

The Policy Dialogue client targets include RTG decision makers who deal with environmental policy (NEB, NESDB, and MOIndustry), allocation of revenue raising authority (MOI and MOF) and representatives of major municipalities (BMA and OUD). In addition, the Federation of Thai Industries (FTI) and representatives of environmental NGOs are clients for policy dialogue on mechanisms for improving public support and private sector performance while minimizing any adverse impacts on economic development. Policy dialogue with these organizations should focus on improving debate and understanding of (1) the impact of pollution on the physical and economic health of the nation, (2) the alternatives available, and (3) the institutional improvements necessary to implement the alternatives.

Institutional Development involves the creation of systems and networks to sustain and implement the decisions reached in the policy dialogue. The client targets comprise those involved with implementing pollution control programs, training environmental professionals, and recovering costs for environmental services. There is also a need to strengthen the institutions concerned with collecting and interpreting environmental data, disseminating information and enhancing public awareness. AID's primary focus should be on the development of institutional mechanisms which can be self sustaining and can rely predominately on available resources.

To engage these client audiences, we recommend a set of three program components:

- 1) Policy Analysis Support for Strategy and Program Design;
- 2) Training and Technical Assistance for Regulatory Development, Enforcement and Service Delivery; and
- 3) Pilot Programs.

Component 1: Policy Analysis Support

There still remain a number of critical policy decisions in the area of urban environmental protection. Whether the focus is industry, automobiles, or domestic sewage, the major shortfall in Thai environmental policy is (not the lack of environmental laws or goals but rather) the lack of sustainable implementation and enforcement. Sustainability for urban environmental programs in Thailand will require major improvements in public awareness, technical and financial support. The major issues that need to be studied and discussed with policy makers include:

Improving Public Awareness and Support

- Strategies for improving public awareness and support for environmental protection including:
 - sewage collection, treatment and disposal;
 - prevention of groundwater pumping;
 - automobile, bus and truck emission control; and
 - industrial pollution.
- Appropriate role of NGOs in providing advice and disseminating environmental information

Improving Technical Support and Service Delivery

- The potential role of the private sector in providing sewage treatment, water supply, automotive and industrial control expertise.
- The feasibility of incentive systems to encourage private industry to use its own expertise to reduce pollution at its source.
- Strategies for enforcing pollution control requirements that can be implemented with a minimum of technically trained manpower.
- Feasibility of adopting common emission standards with other ASEAN nations for control of selected industries.

Improving Financing for Pollution Control

- The role of environmental regulations in assuring adequate cost recovery to attract private investment for sewage treatment and pollution control.
- The potential use of Housing Guarantee and other loan funds to finance sewerage systems once cost recovery enforcement programs are in place.
- The potential use of ground water pumping fees to finance municipal water expansion and flood protection.
- The potential role of pollution fees and cost recovery to pay for pollution control services.

AID has already supported some policy studies on the applicability of user fees for general municipal services (1985-1986) and has agreed to support feasibility studies on the privatization of urban waste water treatment. In addition, although not directly addressing environmental issues, a study of alternative cost recovery mechanisms for urban infrastructure investments is also in the design stage.

Analytic work recommended here provides an opportunity for an important extension of privatization efforts. Not only would the use of private sector resources and expertise play an important role in addressing major environmental problems, but because there is no entrenched bureaucracy to overcome, this privatization effort should move relatively quickly and thereby provide an important model for other applications.

Not only would privatization of environmental services offer the traditional advantages of efficiency and alternative sources of financing, but in this circumstance it offers a source of technical expertise not otherwise available. Furthermore, the design of enforcement systems which rely on gradually rising pollution fees reduce the number of technical judgment calls and allows enforcement to rely more on "meter readers" and less on highly trained engineers and lawyers.

Policy work under this component, can provide an appropriate complement to AID's Management of Natural Resources and Environmental Systems (MANRES). This effort would balance the rural/natural resource focus of MANRES with an urban/economic development initiative.

In order to improve the opportunity for effective policy dialogue deriving from the analytic studies proposed, they should be linked with training seminars and policy conferences to broaden their impact. Ideally, seminars, training and research of this type could be institutionalized as part of an ongoing program in an organization devoted to research and dissemination of information related to urban issues.

Component 2: Training and Technical Assistance

Thailand has a critical shortage of technically trained manpower and many of the best are picked up by the rapidly expanding private sector. Rather than relying on an army of technically trained government field inspectors, as is often done in more developed countries, RTI recommends a program of training and technical assistance designed to accomplish the following objectives:

- a) Make better use of the limited numbers of technical experts currently available to government by providing assistance in:
 - selection and operation of emission monitoring equipment;
 - use of micro computers in the development and maintenance of pollution inventories; and
 - regulatory development, particularly with regard to use of economic incentives and private sector environmental auditors to leverage private expertise.
- b) Rely more heavily on inspectors with limited training (similar to meter readers rather than engineers) by providing training for instructors in vocational schools.
- c) Draw heavily on expertise already available in the private sector, by working through the Thai Federation of Industries to provide:
 - training seminars for managers of manufacturing facilities on cost savings through pollution control and
 - training seminars for private entrepreneurs and pollution control vendors on pollution control requirements and opportunities for privatization. (Such seminars can be most effective when they involve industry representatives speaking from their own experience in recycling and waste minimization.)
- d) Work with environmental NGOs to develop training seminars for teachers, educational administrators, NGO staff, community workers and news media to assist them to develop curricula for their own clients to raise their awareness of environmental issues and public responsibilities.
- e) Provide faculty assistance to develop and expand education programs at Thai universities oriented toward control of urban environmental pollution.

Component 3: Pilot Programs

Three main types of demonstration programs seem to offer the greatest opportunity for long term impact. In each case these efforts seek to initiate sustainable action by addressing key weaknesses in the existing institutions

- a) Private sector involvement in the provision of sewerage and sewage treatment. AID's involvement could include the following:
 - feasibility studies of potential private sector participation;
 - technical assistance in the design and enforcement of regulatory requirements, and
 - capital financing via Housing Guaranty loans.

- b) Collaboration with other ASEAN nations in the development of common environmental standards for selected industrial processes. Such an arrangement would make it easier to enforce responsible standards while decreasing the fear that desired investment would be attracted to "pollution havens." AID's involvement could include:
 - feasibility studies of potential impacts and probable response by other nations and
 - technical assistance in the development of standards and monitoring techniques.

- c) NGO involvement in the development and distribution of environmental education materials designed to raise public awareness and ultimately enlarge the constituency for improved environmental control. AID's role could include:
 - training and technical assistance on the development of environmental forecasting models and educational video tapes and
 - grant funds for the development of environmental newsletters and local training programs.

2.4 Program Area: Urban Policy Research Support

This program area addresses the need for strengthening the institutional base within Thailand for conducting urban policy research and training. It has a somewhat different nature than the other three program areas presented above since it is not directed at a specific set of urban development problems but rather at the organization of urban policy research and dissemination in the country.

2.4.1 Current Situation and Key Institutions

Thailand has a number of well trained professionals in the urban development field and there is, in the aggregate, an imposing body of individual studies dealing with different aspects of urban development in the country. However, the state of urban development research and policy analysis is quite fragmented and poorly organized to provide the guidance needed at the current time.

The current state of urban research and training in Thailand can be characterized as follows:

- 1) There has been very little research on key policy issues in urban development;
- 2) the professional resources are excellent but are spread across a number of separate organizations, providing no "critical mass" of expertise in any one place;
- 3) the information base on urban issues is similarly scattered among different institutions and individual researchers;
- 4) research findings are often not widely disseminated and discussed - most of the discussion is confined to the research community and does not include the political decision makers;
- 5) much of the contact with professionals in the field outside Thailand is through individual faculty contacts at universities; there does not appear to be widespread and organized exchange of information on urban development with other countries;
- 6) there are several critical shortages in urban development expertise found within Thailand, particularly in municipal management and finance, housing finance, environmental regulation, transport planning and land development controls; and

- 7) there are few linkages between the academic community (conducting urban research and formal education in the urban field) and the applied training of urban managers and local officials.

The professional resources in Thailand tend to be scattered across a number of organizations. The main institutions which have faculty and staff involved in urban research include:

Universities/Institutes

- Thamassat University
- Chulalongkorn University - Chula Unisearch
- Asian Institute of Technology
- National Institute of Development Administration

Government Agencies

- NESDB
- MOI Office of Urban Development
- NHA
- Bank of Thailand
- MOF Fiscal Policy Office
- National Statistical Office
- BMA
- Department of Town and Country Planning

Consulting Firms

- TDRi
- Coopers & Lybrand Associates

The dispersed nature of the resources creates a problem of pulling together a common database as well as allowing the critical mass of staff and ideas to develop. The existing database tends to be confined to individual researchers and is generally not shared across agencies. Much data collection is duplicated to overcome these barriers. This duplication also means that a large part of the urban database tends to be continually recreated rather than truly expanded.

Much of the existing body of knowledge has been generated by research undertaken to answer specific questions which deal largely with urban project design or evaluation issues. Much of the research has been funded by donor agencies and the results are confined to project documents. On occasion, these documents are used to prepare additional studies but generally are not used for wider policy debate or academic instruction.

The dispersed nature of the professional resources in the urban field within Thailand places a premium on personal contacts for obtaining information within Thailand as well as for contacts with foreign institutions. For example, contact with urban researchers in other parts of the world is largely on the basis of individual relationships (mainly with university professors) and can be quite restrictive, depending on the reach of the personal network. Furthermore, much of the current innovative work in urban development (for example, private housing finance companies and municipal infrastructure funds) is not being carried out by universities so this channel of communication is also limited.

There is no structure for dissemination of research on urban development issues in Thailand. There is no major publication on urban affairs and few opportunities to present research findings to professional colleagues or, perhaps more importantly, key government decision makers. This limits not only the exchange of ideas but also the chance to contribute to key policy development in the urban sector.

While the overall level of human resources for conducting policy research is quite impressive in Thailand, there are some major gaps. Thailand lacks sufficient expertise in the areas of:

- municipal finance and management;
- housing finance;
- urban transport planning;
- urban environmental management; and
- land development.

The absence of expertise in municipal management is especially problematic if Thailand carries through on its stated national policies of decentralization. The decentralization process will require not only greatly improved training of local government managers but also applied research on how best to implement decentralization and monitoring of its progress. This will call for much closer integration of the urban research activities and the oversight of, and technical assistance to, municipal government.

Outside donor agencies have done relatively little in the past to build up urban policy research and analysis capability within Thailand. However, some of the more effective work by AID, World Bank and ADB include supporting policy studies in (a) urban investment planning for the BMR (The BMR Study), (b) financing municipal infrastructure in the regional cities and (c) the Bangkok Land Management Study — all of which relied extensively on Thai professional expertise. However, there is still too much reliance by donors on foreign consultants and on individual studies that do not add significantly to the body of knowledge or professional expertise.

2.4.2 Policy Agenda

There are 7 main policy issues which should be addressed in strengthening the institutional base of urban policy research in Thailand.

1. There should be a commitment on the part of RTG agencies, donors and consultants (local and foreign) to build the institutional base for policy research and analysis in Thailand.
2. The development of the institutional base should draw together the existing resource base rather than try to create a new capability. The institutional base should include government agency staff, municipal leaders, university faculty and private consultants.
3. An objective of the institutional base should be to link together and serve the needs of government policy research, academic training and municipal operations (i.e., the needs of practitioners in urban governments and service delivery agencies.) It can also serve as a communication link for municipal officials who are otherwise totally dependent on RTG agencies for information.
4. The institutional development should give priority to building a sound information base which is readily accessible and maintained at a high standard.
5. The institutional structure should promote dissemination of research findings and policy debate among analysts and policy makers. This must go beyond publication of results to reach and inform a wide audience.
6. The institutional structure should be linked to foreign centers of research and development in urban affairs, including academic institutions, private organizations and government agencies. These linkages should include regular exchange of information and personnel and opportunities for joint work within and outside of Thailand.

7. The institutional structure should promote the training of additional professionals in the field of urban development. The expansion of high level Thai professional expertise will enable Thailand not only to become less reliant on foreign experts but also to promote Thai consultants in the region (much the same way that India is now exporting management and engineering consultants in the South Asia region).

2.4.3 Targets and Program Options

The main program target is institutional development in strengthening the organizational structure and professional base for urban policy research and training in Thailand.

There are two groups which are the focus of this work:

- suppliers of policy research and training, and
- users of research and training.

The supplier institutions are those which were described under section 2.4.1 above: the universities, RTG agencies and private consulting firms which carry out policy research and training. The users of this work are also government agencies (primarily NESDB, MOI, MOF) as well as the agencies that actually deliver urban services (municipal governments and SOE's).

The purpose of the proposed program is not to create a new institution but rather a new structure in which existing institutions can collaborate more effectively. To do this, we propose an AID supported program with three major components:

- 1) Core support to an urban policy network;
- 2) Support for policy studies; and
- 3) Support for dissemination and training.

Component 1: Core Support To an Urban Policy Network

In order for there to be a structure for ongoing policy research and training in Thailand there must be, at a minimum, funding for a core set of activities which include:

- development of the urban policy research agenda;
- assembling of teams of professionals to conduct research;
- preparing of detailed work scopes and management of research activities;

- maintaining information bases on urban issues in Thailand and reference materials from outside; and
- maintaining contact and information flow within the professional network in Thailand and with urban research and training organizations overseas (see Component 3 below for more detailed attention to training events).

The core activities will require a small Thai staff (about 24-30 professional person months per year plus support staff) probably located within a university or other existing Thai research institution plus some limited assistance from U.S.-based professionals to establish and maintain contacts and acquire reference materials.

A major aspect of this component is the strengthening of linkages with U.S. centers of excellence in urban policy research and development especially in technical areas where there are gaps in Thailand's local expertise. This will involve:

- exchange of faculty (long and short term);
- joint research efforts (especially on policy research topics identified under the proposed program areas of urban finance, infrastructure management and environmental protection);
- joint publications;
- academic course and training program development; and
- involvement of Thai professionals in research and consulting activities of U.S. collaborators outside Thailand.

Much of this activity can be financed by sources other than the proposed core funds; however, the organization and promotion of these activities should be supported by core funding.

Component 2: Support For Policy Studies

The core support described above will not include funding for carrying out policy studies which will vary with the nature of the individual efforts. A number of high priority research topics have been identified in sections 2.1 - 2.3 above and will not be repeated here. It is envisioned that at least 3 types of studies will be conducted:

- major policy studies which require six months or more to complete and substantial professional effort (25 manmonths and up);

- quick response studies which are limited in scope and budget (about 10 manmonths) and require rapid turn around; and
- ongoing monitoring of selected urban indicators (e.g., housing starts) which require small amounts of effort at regular intervals.

These studies would be set up as individual task activities (much as EPD activities are now conducted) but with a simpler review and funding mechanism than that which currently governs EPD. It would be desirable to commit a block of funding for the policy studies to expedite funding decisions and minimize unnecessary administrative expense.

Component 3: Support for Dissemination and Training

This component provides support for training and dissemination activities which include:

- 1) Training:
 - (a) policy seminars;
 - (b) short courses for skills development;
 - (c) academic course development (within Thai institutions);
 - (d) short observational tours within Thailand and overseas; and
 - (e) long term degree programs in the U.S.
- 2) Dissemination:
 - (a) publication of policy research findings,
 - (b) regular newsletter or periodical publication, and
 - (c) news releases to national press.

As with the policy studies under Component 2 above, training activities should be set up as individual task activities with designated budgets. It will be cost effective to establish a routine set of procedures, logistical support, and access to training facilities which can be used repeatedly. This suggests that one or two local institutions be selected as training sites for the urban program with an "indefinite quantity contract" type arrangement to expedite individual training events. This arrangement will provide the basic contracting and support structure without adding unnecessary costs.

Chapter 3

Implications for USAID Programming

3.1 Summary of Proposed Urban Program

A. Policy Development and Support Activities

RTI proposes a series of activities to promote policy reform and to support policy development in the areas of Urban Development Finance, Urban Infrastructure Management, and Urban Environmental Protection.

Urban Development Finance. National policies that affect the availability of funds for capital and operating costs for urban services need to be addressed. These include:

- Decentralization of financial responsibilities and resource mobilization capacity from central to local governments or from public to private sector;
- Enhancing ability of local municipal governments to undertake and manage debt for sound capital improvement programs;
- Selection of more effective instruments to improve revenue mobilization; and
- Development of financial intermediaries to channel domestic savings and foreign loans into infrastructure and housing investments.

Urban Infrastructure Management. Issues which affect national, SOE and municipal provision of urban public services need to be resolved. These include:

- Performance of urban infrastructure services including both adequacy and coverage;
- Constraints on service created by government regulations relating to tariff setting, monopoly controls, and capital expansion;
- Opportunities for private sector models and private sector participation; and
- Alternatives to the current systems for land development controls including alternative organizational structures as well as regulations.

Urban Environmental Protection. National, NGO and municipal policies that affect the sustainable protection of the environment need to be developed. These include:

- Need for enhanced public awareness and involvement to improve public support for environmental programs;
- Use of private sector expertise to address public sector technical shortages regarding environmental issues; and
- Use of fee and incentive systems to improve the environment and finance control programs.

In each case these policy activities seek to enhance the productive capacity of the nation through sustainable improvements in institutional performance. Sustainability and responsiveness of urban services can be improved through decentralization, improved financing and increased reliance on market forces. Carefully targeted technical assistance can play a catalytic role in encouraging these policy directions.

B. Institutional Development Activities

Institutional development and support is also recommended to implement and sustain the policy decisions. These interventions include:

Technical Assistance and Training programs to improve institutional efficiency and responsiveness in service planning, development, and delivery. Assistance and training in the following areas is appropriate.

- Demand analysis and forecasting (including willingness to pay analysis and service pricing) for high priority urban services.
- Performance monitoring for service delivery and regulatory compliance.
- Revenue generation, cost recovery, and improved financial management.
- Public information to raise awareness and generate supportive constituencies.
- Use of economic incentives for environment and land use controls.
- Private sector provision of technical expertise, financing, and administration for public services.

Demonstration Projects to provide hands-on experience in implementation and tangible examples of effective services.

- Private sector involvement in infrastructure provision in one or more of the services of (a) water supply, (b) waste collection, (c) sewerage, (d) transportation, and (e) electricity generation.
- Residential land development along lines of "land readjustment" schemes in Korea and Japan.
- Community-based provision of physical and institutional infrastructure in difficult to administer locations such as slums and informal settlements.

Capital Financing for infrastructure projects could potentially involve the use of Housing Guaranty funds for one or more of the following.

- Initial capitalization of a municipal development fund through new or existing financial intermediaries.
- Capitalization of MWA to provide for more rapid expansion of municipal water supply and thus decrease the need for groundwater pumping.
- Capitalization of a private sector demonstration project on domestic sewage collection and treatment.

Establishment of an Urban Policy Research Network to provide a new structure in which urban research and training organizations can collaborate more effectively. Assistance provided would include:

- Core support to an urban policy network;
- Support for policy studies; and
- Support for dissemination and training.

C. Planning Horizon and Resource Requirements

The overall time frame for the interventions recommended is approximately five years. This is not to suggest that all objectives would be accomplished in that time but that the groundwork for sustainable progress should be prepared and that after that, most of the work can carry forward on its own momentum.

ESTIMATED RESOURCE REQUIREMENTS
(in \$1000's)

| <u>PROGRAM ACTIVITIES</u> | <u>1990</u> | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> | <u>Total</u> |
|---|--------------|--------------|-------------|-------------|-------------|--------------|
| A. Policy Development | | | | | | |
| 1. Municipal & Housing Finance | | | | | | |
| a) Decentralization of financial responsibilities | 80 | 60 | 40 | | | 180 |
| b) Enhancing municipal financial ability | 120 | 80 | 60 | | | 260 |
| c) Improving revenue mobilization | 80 | 80 | 60 | 60 | | 280 |
| d) Development of Financial Intermediaries | 80 | 120 | 80 | 40 | | 320 |
| 2. Infrastructure Management | | | | | | |
| a) Improving service performance | 120 | 120 | 80 | 60 | 60 | 440 |
| b) Reducing government constraints | 80 | 120 | 80 | 60 | 60 | 400 |
| c) Encouraging private sector participation | 120 | 160 | 160 | 120 | 80 | 640 |
| d) Promoting alternative land use controls | 80 | 240 | 120 | 60 | 40 | 540 |
| 3. Environmental Protection | | | | | | |
| a) Improving public awareness | 120 | 80 | 40 | 40 | | 280 |
| b) Enhancing role of private sector | 120 | 120 | 80 | 40 | 40 | 400 |
| c) Promoting use of incentive systems | 80 | 240 | 120 | 60 | 40 | 540 |
| Subtotal | <u>1,080</u> | <u>1,420</u> | <u>920</u> | <u>540</u> | <u>320</u> | <u>4,280</u> |

ESTIMATED RESOURCE REQUIREMENTS
(in \$1000's)

| <u>PROGRAM ACTIVITIES</u> | <u>1990</u> | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> | <u>Total</u> |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|--|
| B. Institutional and Human Resource Development | | | | | | |
| 1. Technical Assist & Training | | | | | | |
| a) Demand analysis & forecasting | 80 | 120 | 60 | | | 260 |
| b) Performance monitoring for service delivery | 200 | 300 | 300 | 240 | 120 | 1,160 |
| c) Revenue generation & Cost recovery | 120 | 240 | 240 | 120 | 120 | 840 |
| d) Use of economic incentives | 80 | 240 | 240 | 120 | 100 | 780 |
| e) Private sector provision of public services | 240 | 400 | 400 | 240 | 120 | 1,400 |
| 2. Demonstration Projects | | | | | | |
| a) Private sector provision of urban services | 160 | 240 | 400 | 400 | 400 | 1,600 |
| b) "Land readjustment" implementation | 120 | 240 | 240 | 240 | 240 | 1,080 |
| 3. Capital Financing | | | | | | |
| | | | | | | Resource needs in each area exceed HG limits |
| a) Municipal development fund | | | | | | |
| b) Sewage collection & treatment | | | | | | |
| c) Rapid expansion of Muni. Water Authority | | | | | | |
| 4. Establishment of Urban Policy Research Network | | | | | | |
| a) Urban policy network | 75 | 75 | 60 | 60 | 60 | 330 |
| b) Urban policy studies | 60 | 60 | 60 | 60 | 60 | 300 |
| c) Dissemination & training | 40 | 40 | 40 | 40 | 40 | 200 |
| Subtotal | <u>1,175</u> | <u>1,955</u> | <u>2,040</u> | <u>1,520</u> | <u>1,260</u> | <u>7,950</u> |
| TOTAL | <u><u>2,255</u></u> | <u><u>3,375</u></u> | <u><u>2,960</u></u> | <u><u>2,060</u></u> | <u><u>1,580</u></u> | <u><u>12,230</u></u> |

3.2 Link to Mission CDSS

A. Relevance to ADC Strategy

Sustainable urban development is central to the viability of an Advanced Developing Country. Provision of adequate services is crucial to this process. In less developed countries with economies geared primarily to extractive industries and agriculture, large enterprises provide their own infrastructure and smaller low-value-added ones do without. Thus the efficiency of both large and small enterprises is substantially lower than they might otherwise be. In an ADC, characterized by large numbers of small sized but high-value-added micro enterprises, the external economies of scale provided through urban infrastructure are essential to sustainable development.

In Thailand agricultural and extractive industries now provide only 16% of the GDP and with the logging ban and the prospect of lower prices for agricultural commodities, this percentage may soon fall even lower. The major sources of growth are now manufactured exports, tourism, and foreign investment: all highly dependent on urban infrastructure.

The RTG recognizes this linkage and is committed to making major improvements in the efficiency and capacity of urban services. Unfortunately, efforts to augment the physical infrastructure have been chronically inadequate because of the institutional limitations. Urban services require not only the physical structures that service the economy but the institutional systems that sustain them as well. Just as shortages in vital infrastructure constrain development, infrastructure itself is constrained by institutional limitations in:

- Science and Technology.
- Capital Market Formation.
- Human Resource Development.
- Natural Resource Protection, and
- Public Information, Awareness, and Support.

Weaknesses in each of these areas are likely to continue as long as market demand signals are disrupted by government policies which constrain supply and distort pricing of services. For these reasons, and because of these interdependencies, an ADC strategy to improve urban services requires an integrated agenda that targets policy weaknesses in each of these critical dimensions and promotes interventions to address them.

B. Fit with other Mission priorities:

The proposed set of urban activities is closely integrated with other mission activities. The policy orientation as well as the overall emphasis on institutional strengthening, human resource development, privatization, environmental protection and mutuality of interests is not only compatible with, but actually central to, the Mission's focus on sustainable development.

Policy Agenda The proposed agenda focuses on promoting dialogue to encourage adoption or clarification of policies in the following areas:

- Promotion of private provision of urban services through increased incentives and decreased regulatory barriers;
- Improvement of financial sustainability through cost recovery and development of financing mechanisms;
- Increasing technical capability through greater reliance on the private sector;
- Strengthening public involvement and support through improved linkages with NGO's, universities and private industry organizations; and
- Promotion of decentralization of resources and responsibilities to strengthen regional cities and promote pluralism.

Institutional Development The development of strong institutions (both public and private) is vital to the development and sustainability of urban services. The proposed program supports institutional development and improved linkages with the following:

- NESDB, MOF, MOI, NEB, BMA, BMTA, MWA, PWA, & EGAT;
- FTI and Environmental NGO's; and
- Municipalities and urban training/research centers.

In addition, the proposed program calls for the establishment of a new network to facilitate the development and exchange of information on urban issues. Provision is also made for development of financial intermediaries to improve access to capital investment funds for urban service providers.

Human Resources The proposed interventions in support of urban developments pay particular attention to the need for training and technical assistance for development of human resources. These interventions include activities designed to:

- Remove policy barriers to increasing supply of skilled manpower in engineering, management, and finance;
- Improve productivity and responsiveness to consumer demand; and
- Build urban research and training capacity.

C. Mutuality of Interests

The recommended urban program for USAID/Thailand strongly supports the mutual interests of the U.S. and Thailand.

Economic Development is directly linked to both the health of the urban economy and the external economies of scale provided through the urban infrastructure systems. Value added per capita, economic growth rate, and income per capita are all several times higher in urban areas than in rural ones and each generally declines inversely with distance from the urban infrastructure. In addition, it should be recognized that U.S. trade with Thailand is primarily focussed on urban areas where there is the greatest demand for U.S. goods and services. Strong urban economic growth translates directly into increased U.S. exports.

Science and Technology development is heavily dependent on good communications, water supply, sanitation, and electricity. Furthermore, all Thai universities are located in urban areas and most are in Bangkok. The incentive systems and market based policies recommended for building sustainable infrastructure also provide an important market for science and technology. Telecommunications, transportation, sanitation, and power generation consistently provide some of the largest markets for science and technology. These markets can be increasingly penetrated by exporters of U.S. scientific and technological products.

Public Participation in Thailand is usually greatest on "backyard" issues where the likelihood of being affected by the decisions are also the greatest. Not only does the urban agenda support public participation as a key ingredient, but infrastructure issues are an important training ground for participatory democracy on larger issues. The development of urban-based NGOs in Thailand will strengthen democratic processes. The potential for creating linkages for these Thai NGOs with similar U.S. NGOs provides yet another dimension for strengthening Thai-U.S. relations.

Human Resource Development is key to all of the Mission's intervention strategies and is also a major component of the urban program. Not only are training and technical assistance an integral part of the urban strategy but human resource development itself is heavily dependent on the transportation, communication, and other infrastructure services provided. Since the U.S. has a strong comparative advantage in urban related training and technical assistance, it is to our advantage to be engaged in this aspect of human resource development in Thailand.

Environmental Protection is an integral part of the world economy. Not only is Thailand a potentially important market for U.S. pollution control technology but experience in the U.S. and EEC has shown that environmental standards and competition are closely linked. When competitive industries in different states or nations are subjected to grossly different environmental standards, both free trade and strong environmental standards are soon in jeopardy. Just as Thailand's failure to protect intellectual property rights adversely impacts trade negotiations, failure to enforce reasonable standards for the protection of the environment will ultimately lead to Thailand being regarded as a "pollution" haven for uncontrolled industry and could lead to trade sanctions to assure fair competition. It is in the interest of both Thailand and the U.S. to defuse this potential area of conflict as soon as possible.

D. Conclusion

This analysis of priority urban programs for Thailand provides recommendations for the support of policy development, institutional development, and human resource development. These activities are designed to integrate closely with other mission activities in the support of an ADC strategy. Where successful, these recommendations lead not to specific capital investments but rather to investments leading to the improvement of urban institutional processes. These processes, we believe, will more effectively enlist private capital and public resources in the development of efficient and self sustaining urban areas necessary for the support of an advanced developing country.