

RRP:IND 27132

# ASIAN DEVELOPMENT BANK

REPORT AND RECOMMENDATION

OF THE

PRESIDENT

TO THE

BOARD OF DIRECTORS

ON

TWO PROPOSED LOANS AND TECHNICAL ASSISTANCE

TO THE

REPUBLIC OF INDIA

AND THE

HOUSING DEVELOPMENT FINANCE CORPORATION LIMITED

FOR THE

KARNATAKA URBAN INFRASTRUCTURE DEVELOPMENT PROJECT

November 1995

## CURRENCY EQUIVALENTS

(as of 15 November 1995)

Currency Unit	=	Rupee (Rs)
Rs34.63	=	\$1.00
Rs1.00	=	\$0.0289

The exchange rate of the Rupee is determined by the Bank of India under a system of managed float. For the purpose of calculations in this Report, a rate of \$1.00 = Rs31.4 has been used. This was the approximate rate generally prevailing at the time of appraisal for the proposed Project.

## ABBREVIATIONS

CBO	Community-based Organization
DHUP	Department of Housing and Urban Development
ERR	Economic Internal Rate of Return
FIR	Financial Internal Rate of Return
HDFC	Housing Development Finance Corporation
HF	Housing Finance Institution
IA	Implementing Agency
ICB	International Competitive Bidding
IS	International Shopping
KUIDFC	Karnataka Urban Infrastructure Development Finance Corporation
KUWSDB	Karnataka Urban Water Supply and Drainage Board
LGB	Local Competitive Bidding
LIG	Low-income Group
MUAE	Ministry of Urban Affairs and Employment
NGO	Nongovernment Organization
NHB	National Housing Bank
OM	Operation and Maintenance
PIU	Project Implementation Unit
PMU	Project Management Unit
PWD	Public Works Department
REAP	Revenue Enhancement Action Plan
TA	Technical Assistance
ULG	Urban Local Government

## NOTES

- (i) The fiscal year (FY) of the Government ends on 31 March.
- (ii) In this Report, "\$" refers to US dollars.

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## LOAN AND PROJECT SUMMARY

<b>Borrowers</b>	:	Republic of India: \$85 million; and Housing Development Finance Corporation (HDFC) Limited: \$20 million.	
<b>Guarantor</b>	:	India	
<b>Project Outline</b>	:	The Project is designed to support the Government's priority investment in the urban sector, based on a Government-formulated plan for the development of the most urbanized states in India. The Project is an integrated Urban Infrastructure Development Project, under which assistance will be provided to the Karnataka State Government for development of water supply and sanitation, solid waste management, urban road improvement, slum upgrading, provision of serviced residential sites for low-income groups, provision of serviced industrial and commercial sites, as well as assistance toward Project implementation and institutional strengthening measures. Assistance toward low-income housing finance will be provided directly to HDFC.	
<b>Classification</b>	:	Primary	: Human Development
		Secondary	: Reduction of Poverty
<b>Environmental Assessment</b>	:	An initial environmental examination (IEE) was undertaken.	
<b>Rationale</b>	:	Bangalore, the capital of Karnataka State, has in recent years been expanding at an extremely rapid rate. Because of its locational advantage, favorable climatic conditions, and the availability of good physical infrastructure, the city has been the recipient of large local and foreign investments over the past 20 years with increasing outlays since 1991 when the Government started its economic liberalization program. This rapid expansion of industrial activities and the increased migration of people from rural areas and other parts of the country to Bangalore are placing considerable strain on the existing infrastructure facilities in the city. The living conditions of the residents are deteriorating rapidly, urban poverty is rampant, and environmental problems are on the rise. It is in this context that the Government approached the Bank for assistance in formulating an integrated urban development strategy for the Bangalore subregion and preparing a project that will enable the development of selected "counter-magnet" urban locations/growth centers and reduce the pressure on Bangalore. The criteria in selecting counter-magnets and growth centers for upgrading under the Project are (i) their location vis-a-vis Bangalore, (ii) existing population and annual growth, (iii) quality of infrastructure facilities and related amenities available in the area, and (iv) the extent to which the proposed locations are self-contained urban areas. Eleven selected towns were evaluated and	

a list of counter-magnet urban locations and growth centers was prepared and ranked according to priority. This exercise resulted in the selection of Mysore as the only counter-magnet at present and Tumkur as a potential counter-magnet. It also identified Channapatna and Ramanagaram as high-priority growth centers. Besides the basic infrastructure deficiencies and related environmental aspects in these towns, the Project will address the long-term objectives of the Government for the sector (accessibility of basic services through coverage, sustainability and cost recovery) and will assist the Government to implement policy reforms, particularly those pertaining to sectoral capacity and financial constraints. In addition, because of the shortage of housing and housing finance, particularly to the low-income groups, the central Government requested Bank assistance in providing housing finance through the Housing Development Finance Corporation, a private sector institution.

**Objectives and Scope:**

The fundamental objective of the Project is to promote decentralization of population growth and economic activity in Bangalore by addressing the basic infrastructure deficiencies and related environmental aspects in selected urban areas in the Bangalore subregion, namely Channapatna, Mysore, Ramanagaram, and Tumkur. Other objectives of the Project are (i) capacity building of urban local governments and other sector institutions to ensure sustainability of urban investments and (ii) providing financial assistance for housing to the low-income groups of the community at affordable interest rates. The Project consists of six parts:

**Part A. Environmental sanitation:** augmentation of water supply, rehabilitation and expansion of sewerage systems, solid waste management programs, and comprehensive storm water drainage and sullage disposal schemes in the four towns.

**Part B. Road improvement and truck and bus terminals:** rehabilitation and upgrading of about 190 km of urban roads, a study of the traffic management situation in each Project town and, based on the findings of the study, introduction of traffic management measures to ensure better traffic flow, construction of a truck terminal in Mysore and Tumkur, and upgrading an existing bus stand in Ramanagaram to ease traffic congestion in these towns.

**Part C. Poverty reduction:** slum upgrading through provision of basic amenities such as water supply, sanitation, drainage and solid waste facilities to about 31 slum areas in the four Project towns; provision of low-cost sanitary latrines to about 23,700 low-income households; and development of about 7,200 housing sites with basic amenities, 65 percent of which will be allocated to low-income beneficiaries and 35 percent to middle-income beneficiaries. Besides these, a cultural-cum-commercial and

training center will be constructed in Ramanagaram, and a women's training center in Tumkur with facilities for women to develop their skills and engage in income-generating activities.

**Part D. Development of industrial sites and services:** development of about 80 ha in Tumkur and 10 ha in Ramanagaram, with provision of roads, water supply, and drainage and sanitation facilities for industrial and commercial activities to generate economic activity in these towns.

**Part E. Implementation assistance and institutional strengthening:** equipment, service vehicles, training, incremental staffing costs as well as consulting services toward Project implementation and capacity enhancement of urban local governments.

**Part F. Low-income housing finance:** alleviation of the current housing shortage in the Project towns as well as in other selected areas within the Bangalore subregion through the provision of housing finance primarily to low-income beneficiaries at affordable interest rates without any form of subsidy.

**Cost Estimates :** The Project is estimated to cost \$132.0 million of which \$36.0 million is the foreign currency cost and \$96.0 million is the local currency cost.

Source	Foreign Exchange Cost	Local Currency Cost	(\$ million)	
			Total	Percent
1. Bank Loan to India	36.0	49.0	85.0	64.4
2. Bank Loan to HDFC	-	20.0	20.0	15.2
3. Government of Karnataka	-	19.3	19.3	14.6
4. Equity by Urban Local Governments and other institutions (in kind/land)	-	7.7	7.7	5.8
<b>Total</b>	<b>36.0</b>	<b>96.0</b>	<b>132.0</b>	<b>100.0</b>

**Loan Amount and Terms :** A loan of \$85 million to India and \$20 million to HDFC from the Bank's ordinary capital resources (OCR) for 25 years including a grace period of 5 years at the Bank's variable interest rate.

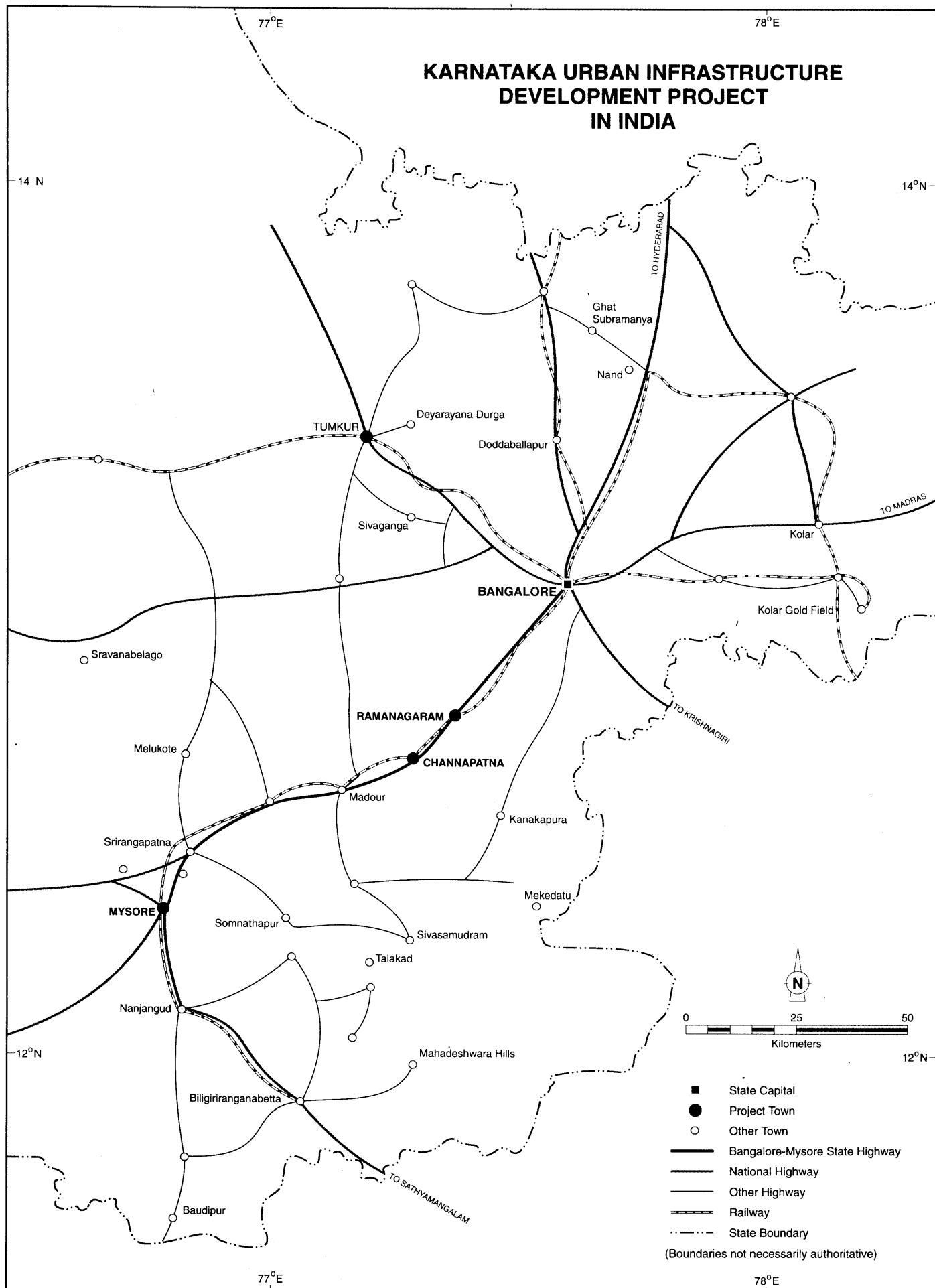
**Period of Utilization :** Until 30 June 2002

**Implementation Arrangements :** A Project Management Unit already set up within the Department of Housing and Urban Development will be involved in coordination and management of Project activities for both loans.

An Empowered Committee with full powers to take decisions on all matters relating to the Project at the State level has been approved by the State with appointment of members to be made before 31 December 1995. A high-level Project Steering Committee will also be set up within three months of loan effectivity at the central level to ensure smooth and orderly implementation.

<b>Executing Agencies :</b>	Department of Housing and Urban Development and Housing Development Finance Corporation.
<b>Procurement :</b>	Procurement of goods and services will be in accordance with the Bank's <i>Guidelines for Procurement</i> . Equipment will be acquired using international competitive bidding and international shopping procedures as appropriate. Civil works contracts that are relatively small in size will be carried out using local competitive bidding procedures.
<b>Consulting Services :</b>	Selection and engagement of consultants will be in accordance with the Bank's <i>Guidelines on Use of Consultants</i> . A total of 978 person-months of consulting services will be required (97 international and 881 local) for Project design, construction supervision and institutional strengthening. The Government has requested Bank approval for advance action for consultant recruitment.
<b>Estimated Project Completion Date :</b>	31 December 2001
<b>Project Benefits and Beneficiaries :</b>	The Project will support the need for urgent improvement in urban infrastructure facilities in the four Project towns, improve the working and living conditions of the inhabitants, improve the urban environment, and stimulate economic growth. It will directly benefit about 520,000 people, of whom around 70 percent currently belong to low-income groups, earning less than \$88 per month. The employment benefits of the Project will be considerable. It is estimated that 200,000 person-months of work will be available during the construction phase, 15,000 person-months per annum will be required to carry out operations and maintenance of Project facilities, and an estimated 10,000 full-time jobs will be available in the newly developed industrial estates. Resource cost savings and increases in welfare as measured by the enhanced willingness to pay for better services will be the major economic benefits from the Project. Economic and financial analysis carried out for various Project components demonstrate that the Project is economically and financially viable. Support for institutional development, training of staff, and policy reform will help build strong and more financially viable sector institutions, which will contribute greatly to sector efficiency and Project sustainability.

# KARNATAKA URBAN INFRASTRUCTURE DEVELOPMENT PROJECT IN INDIA





## **I. THE PROPOSAL**

1. I submit for your approval the following Report and Recommendation on two proposed loans to India and the Housing Development Finance Corporation Limited for the Karnataka Urban Infrastructure Development Project. The Report also describes proposed technical assistance for the Resource Mobilization Study for Local Governments in Karnataka State, and if the proposed loans are approved by the Board, I, acting under the authority delegated to me by the Board, shall approve the technical assistance.

## **II. INTRODUCTION**

2. The Government of India has formulated a plan for the development of the most urbanized states in the country. Based on this plan, the Government requested the Bank to provide assistance to Karnataka State, which was identified as a priority state for development of urban infrastructure facilities because of its rapidly growing urban population. To prepare the Project, the Bank provided a project preparation technical assistance (TA).<sup>1</sup> The TA consultants commenced fieldwork in May 1994 and, after extensive consultation with local residents including NGOs, formulated a Project for the Bank's consideration. The details of the consultants' findings were provided to the Bank and the Central and State Governments in a draft final report in December 1994, which was discussed at a tripartite meeting in New Delhi in December 1994. The Final Report was submitted in February 1995, incorporating comments provided by the Central and State Governments and the Bank. An Appraisal Mission visited India from 16 June to 5 July 1995.<sup>2</sup> This report is based on the findings of the Mission; reports prepared by the TA consultants; and discussions with Government departments at both the central and state level, international organizations, and agencies concerned with urban development activities in India.

## **III. BACKGROUND**

### **A. The Urban Sector**

3. India's urban population has grown rapidly from 159 million in 1981 (23 percent of the total population) to 217 million in 1991 (26 percent). By the year 2000 it is projected that the urban population will have reached 350 million or over 30 percent of the total population and by 2025 the number will have risen to 790 million or about 55 percent of the projected total population. Urbanization is taking place throughout the country. By 1991 the number of cities with a population in excess of 100,000 reached 296 against 209 in 1981, while 23 cities had populations in excess of one million.

4. This rapid growth in the urban population is placing a tremendous pressure on urban infrastructure facilities and services such as housing, water supply, sanitation, drainage, transport, health, and education facilities. Large neighborhoods of slum and squatter settlements with little or no access to basic services have developed on the peripheries of cities. It is

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<sup>1</sup> TA No. 1977-IND: *Urban Infrastructure Development Project*, for \$646,000, approved on 12 November 1993.

<sup>2</sup> The mission comprised Francis B. Narayan (Senior Financial Analyst/Mission Leader); Nigel C. Rayner (Project Economist); F.P. Mesch (Senior Counsel); P.K. Thomas (Urban Development Specialist/Staff Consultant); and K.G. Krishnamurthy (Housing Finance Expert/Staff Consultant).

estimated that the slum population increased from 28 million in 1981 to about 51 million in 1991, and is expected to exceed 100 million by the year 2000. In the 23 cities with a population in excess of one million, 28 percent of the people live in squatter settlements and as much as 35 percent of the urban population live below the official poverty line.

5. The urban economy currently produces about 50 percent of India's gross domestic product and this is expected to rise to about 60 percent by the end of the century. Since the urban economy is an increasingly important source of economic growth for the country, appropriate policies need to be developed at the national, state, and local levels to enhance urban productivity and efficiency. The major challenges for the Government will be to (i) improve economic efficiency and productivity; (ii) reduce urban poverty by providing basic services and improving slum and squatter settlements and creating income-generating activities for the poor; (iii) improve productivity of the labor force, facilitating the expansion of small-scale enterprises and promoting efficiency in the informal sector; and (iv) strengthen environmental management programs.

6. Karnataka State, like several other states in India, is becoming more urbanized. Over the past few decades, Karnataka has consistently had a higher proportion of its population living in urban areas than the average for the country as a whole. This trend was confirmed in the 1991 census which showed that almost 31 percent of the population of this state now live in the urban areas whereas the average for India is about 26 percent. In terms of actual numbers, Karnataka had an urban population of 13.9 million in 1991 as against 7.1 million in 1971 and 10.7 million in 1981. During 1981-1991, Karnataka's population increased at the rate of 1.9 percent per annum while the urban population increased at the rate of 2.6 percent per annum. The number of towns and cities increased from 227 in 1971 to 254 in 1991. The population of Bangalore, the capital of Karnataka, has been rising rapidly with a compound annual growth rate of 4.2 percent as against the average of 1.9 percent for the State. The current population of Bangalore is 4.7 million. The urban sector is playing an increasingly important role in the State's economic and social development. The sector contribution to the net state domestic product is estimated to have grown from 43 percent in 1980/81 to 52 percent in 1992/93. In 1990/91, Bangalore's urban district alone contributed nearly 17 percent to the State's net domestic product.

7. At the national level, the lead agency for the development of the urban sector, including policy development and coordination, is the Ministry of Urban Affairs and Employment (MUAE). At the state level, urban development is the responsibility of the Department of Housing and Urban Development (DHUD). At the local level, responsibility for urban development activities is divided between urban local governments (ULGs), development authorities, and line agencies of the State.

8. Several factors in the past have impeded the growth of urban infrastructure and services: (i) weak institutional capabilities, particularly at the level of ULGs; (ii) financial resources that are often insufficient to meet operation and maintenance costs; (iii) insufficient participation in urban development activities by the local communities and the private sector; and (iv) problems related to land acquisition, municipal tax reform, cost recovery, municipal development, and the legislative framework. In Project formulation and design, all the foregoing sector issues and constraints were fully analyzed and addressed through constructive policy dialogue (see para. 18). The Government and the State recognized these sector weaknesses and initiated policy reforms to strengthen urban sector organization, planning, and management. The

recently approved 74th Constitutional Amendment Act (see para. 11) and the appointment of the State Finance Commission are evidence of the Government's and the State's commitment in this regard. Assistance is also envisaged to be provided through the Project as well as through the proposed advisory technical assistance (see paras. 76-77) to support the State's efforts in strengthening sector policies, capabilities, and resources.

## **B. Government Policies and Plans**

9. The Government plans and policies for the sector are divided into federal policies and state level policies. At the federal level, the policies are directed toward recognizing the problems of the urban poor, which are seen to be linked with the creation of employment opportunities. Specifically it recognizes that urban development policies can directly contribute to achieve the goals of poverty reduction and the removal of unemployment and underemployment. In this regard, the policy asserts that planning of urban development should essentially be supportive of the economic and social development of the country.

10. The policy has its origins in the Seventh Five-Year Plan (1985-1990), which explicitly recognized that (i) the problems of the urban poor are linked with employment opportunities, and (ii) urban development can directly contribute to poverty reduction by decreasing unemployment and underemployment. The Plan emphasized the use of industrial location policy to underpin regional and urban planning and suggested that a concerted effort be made by channeling private industrial investment to areas in the vicinity of small and medium-sized towns to check migration of the population to the cities. The Plan suggested that regional urban systems be developed on the basis of regional characteristics and needs as well as functions of each town in its regional context. More explicitly, the needs of the poor need to be taken into account in all physical planning exercises. The Seventh Plan policies proved successful. Under this Plan significant progress was made with 145 additional towns being covered under the scheme for integrated development of small and medium towns and about 10 million slum-dwellers benefiting under the scheme for environmental improvement of urban slums. Based on experience gained during the Seventh Five-Year Plan and the two subsequent Annual Interim Plans (1990, 1991), and taking into consideration the emerging issues and perspectives as indicated in the Report of the National Commission on Urbanization,<sup>1</sup> the Eighth Five-Year Plan (1992-1997) continues the policies and strategies of the Seventh Plan with the priority area of the Eighth Plan being mainly the effective implementation of the strategies adopted during the Seventh Plan. Resource mobilization and programs aimed at institutional strengthening and capacity building are also given considerable emphasis in the Eighth Plan.

11. The 1992 Constitution (74th Amendment) Act initiated Government commitment to the devolution of power and responsibility for municipal development and management to ULGs. Some key changes taking effect as a result of the 74th Amendment are (i) increased community participation in urban affairs through elected representation at the ward and municipal levels; (ii) development planning and implementation of development activities at the municipal level, including urban structure and socioeconomic planning, land-use regulation, water supply, sanitation, road transport, solid waste management, slum improvement, and urban poverty reduction; and (iii) establishment of State Finance Commissions to help municipalities strengthen their financial resources and improve their operational efficiencies.

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<sup>1</sup> Set up by the Government in 1986 to review and analyze urban sector issues.

12. For Karnataka State, the urban policies are specifically articulated in the State Eighth Five-Year Plan as follows: (i) to evolve a desired pattern of balanced regional development and create effective linkages between urban and rural areas; (ii) to distribute the urban population proportionately among various classes of towns and regions; (iii) to contain the rate of growth of metropolitan and other large cities by dispersing economic activities to identified growth centers; and (iv) to provide at least a minimum level of services to ensure life of good quality to both urban and rural areas.

### **C. External Assistance to the Sector**

13. External assistance to the urban development sector in India has been limited, with the World Bank providing support for urban development in three states, the last being that for Gujarat approved in 1986. Germany, Japan, Netherlands, United Kingdom, and United States have also provided limited assistance to the sector. Karnataka State has not received financial assistance from any aid agency except from the Netherlands, which has provided grants toward (i) a study of solid waste management in Bangalore; (ii) the design of a training program for low-cost housing, urban development, and finance for state municipal officials; and (iii) a project to develop a strategy for poverty reduction in Bangalore. Detailed information on external assistance to the sector since 1988 is presented in Appendix 1.

### **D. Lessons Learned**

14. This Project is the Bank's first involvement in the urban development sector in India and as such, there are no lessons of experience pertaining to the sector that could be incorporated in the Project design. However, the World Bank's experience in the sector dates back to 1977. In the formulation of the Project, the Bank's Fact-finding Mission discussed with the World Bank officials their experience in the sector with a view to incorporating this experience as relevant in the proposed Project design. The main problems encountered by the World Bank related to the weak financial resource base of local governments, delays in consultants' selection, delays associated with land acquisition, and lack of political will in raising taxes and tariffs. Each issue was taken up with the Government and the State in the policy dialogue and corrective measures as appropriate were agreed upon.

15. Although not involved in the sector, the Bank has been providing assistance to other sectors in India since 1986. The problems associated with the various Bank Projects over the years have been analyzed. They include (i) delays in procurement of goods and services; (ii) unavailability of land in a timely manner; (iii) delays in various levels of Government approvals and clearances, and lack of timely release of counterpart funds. The Bank has been working with the Central and State Governments toward rectifying these deficiencies so as to speed up implementation of ongoing projects. Recent initiatives to improve the situation include (i) the preparation by the Central Government with Bank assistance of standard procurement documentation; (ii) agreement by the Central Government Ministry of Finance to release 25 percent of the budget requirements for capital expenditure during the first two weeks of the fiscal year; and (iii) allowing State Governments to acquire land based on negotiated prices, instead of recorded transaction prices, thus avoiding long drawn out legal processes. All the foregoing corrective measures have been included in the implementation arrangements for the proposed Project, in addition to other Project specific implementation arrangements (see paras. 56-59).

## **E. The Bank's Sectoral Strategy**

16. The Bank's operational strategy in India is based on an infrastructure development strategy to support industrialization by (i) strengthening the policy environment to promote private sector participation, (ii) supporting industrialization through the provision of economic infrastructure, and (iii) making catalytic private sector investments in areas where the policy environment has been enhanced or where new technology is being introduced. In pursuing this strategy, the Bank will continue to support a limited range of sectors and Projects so as to maximize its development impact. The emphasis on supporting industrialization, which is regarded as a key to economic growth in India, will continue.

17. Against this background, the Bank's involvement in the urban sector pertains to the following major areas: (i) creating a conducive policy environment, (ii) supporting economic growth potential, (iii) optimizing poverty reduction impact, (iv) improving the environment, (v) facilitating the development of women, and (vi) enhancing institutional capacity at the local level.

## **F. Policy Dialogue**

18. In the course of Project preparation, several institutional strengthening measures and policy reform issues have been identified, which need to be addressed in accordance with an agreed upon timetable to improve sector efficiency and enhance local governments' resource base. If the local governments and service agencies are to meet their obligations and be in a position to efficiently operate and maintain the facilities provided to them under the Project, then it is imperative that the State provide them with the necessary support and assistance in the proposed institutional strengthening and revenue enhancement measures. The institutional strengthening and policy reform measures agreed upon with the State and supported by the Central Government are presented in the time-bound Institutional, Financial, and Operational Action Plan in Appendix 2 and are summarized below along with some other policy reforms.

### **1. Exercise of Authority**

19. The ULGs, todate have been reluctant to exercise their delegated authority pertaining to their routine operations. It has been agreed that the State will henceforth require the ULGs to exercise their delegated authority to improve their operational efficiency. This will include setting local-level charges and levies to improve their financial resource base and imposition of appropriate penalties on defaulters, including the discontinuation of urban services, and to engage and dismiss staff in line with sound business practices.

### **2. Revenue Enhancement**

#### **a. Cost Recovery and User Charges**

20. There is considerable scope for enhancing local government revenues through the strengthening of cost recovery measures currently applicable and the introduction of new user charges for municipal services, such as solid waste management and other services, for which no direct charges are now made. It has been agreed that current user charges will be reviewed and adjusted as necessary and new user charges will be introduced in accordance with an agreed upon, time-bound action plan (see Appendix 2).

### **b. Collection Efficiency**

21. The collection efficiency for municipal charges including water supply dues currently varies from about 40 percent to 80 percent for the different Project towns. Concerted efforts will be made to improve the collection efficiency of user charges. The State will more aggressively pursue the collection of user charges and tariffs in the future and will introduce penalties for nonpayment of charges, for example, discontinuation of urban services to defaulters. To ensure that all revenues due to the local governments of the four Project towns are promptly collected, a collection efficiency of 90 days arrears will be achieved over time and maintained in accordance with an agreed upon timetable as shown in Appendix 2.

### **c. Water Tariffs**

22. During Project processing, it was realized that the current water supply tariffs were inadequate to meet the cash flow requirements of the various water supply utilities. Following extensive policy dialogue with the State, it was agreed that water tariffs should be increased sufficiently to meet at least the operation and maintenance (O&M) costs of the water supply utilities. Subsequently the State issued a notification authorizing Karnataka Urban Water Supply, Sewerage, and Drainage Board (KUWSDB) to increase water tariffs by an average of about 40 percent from 1 February 1996. This notification sets the minimum water rates that should be charged for each category of consumer and allows local governments to charge a higher tariff if additional revenues are needed for adequate O&M of water supply and sanitation facilities. Local governments will be encouraged to charge, in line with the authority given in the notification, the full cost of water production and distribution.

### **d. Property Tax**

23. Property taxes are the main source of revenue for local governments, yet the assessment and collection of this tax at the local level are extremely weak at present. There are municipalities that, although allowed by law, have not revalued properties for many years and are extremely lax in collecting even the taxes levied. In the interest of improving the financial resource base of local governments, there is an urgent need to strengthen the valuation and assessment procedures and impose more stringent penalties on defaulters. It has been agreed therefore that the property taxes will be reviewed and revised every four years. This review will be achieved within the framework of existing legislation. The proposed advisory TA for a resource mobilization study (see paras. 76-77), which is expected to commence by February 1996, will assist the State in critically reviewing the existing property tax mechanisms with a view to making recommendations toward their improvement and also to explore and recommend innovative measures to improve the revenues of ULGs from this important source.

## **3. Other Policy Reforms**

### **a. Industrial Sites and Services Development**

24. The Karnataka Industrial Area Development Board has, in the past, developed large tracts of land for industrial development purposes in numerous locations around Bangalore (except in Ramanagaram and Tumkur). These areas, although allocated, have been in part unutilized for many years, leading to waste of State and local government resources. In-depth analysis has revealed that underutilization is due to the fact that, currently despite legal provision,

there is no requirement that the allottee must commence industrial activities on such land within a specified period. This unsatisfactory situation needs rectification. In the Project, provision has been made for development of industrial sites and services in Tumkur and Ramanagaram. To ensure that the proposed developments will achieve the objectives of industrialization of these cities, it has been agreed that the State will establish a more rigorous procedure requiring that allocated industrial land be utilized within one year and industrial activity commenced within three years of such allocation. Failure to comply with this provision will result in repossession of the developed site for reallocation. Such a conditionality will ensure that the objective of industrial sites development is achieved without undue delay.

#### **b. Preparation of the Bangalore Subregional Plan**

25. Currently, there are numerous government agencies at the State and municipal levels affected by the rapid growth experienced in Bangalore and the surrounding areas, and there is a clear need to coordinate their plans, policies, and programs on a regional basis. Such coordination will assist the ULGs in maximizing the economic and social benefits that growth can bring to the area. Further, there is an urgent need to integrate industrial development and investment plans into the policies of the physical planning agencies. Over the years, weak development control mechanisms have allowed the expansion of Bangalore and the surrounding towns through accretion. The results are unplanned developments and negative health, safety, and environmental impacts on the region and its people. At present, there is no legal framework available in the State to plan and coordinate the development of such a large subregion. Therefore, to promote decentralization of economic growth from Bangalore to nearby targeted "counter-magnet" and "growth" urban areas, agreement has been reached with the State to prepare under the Project a well-researched conceptual plan for the Bangalore subregion comprising the following districts: Bangalore Urban and Bangalore Rural, Tumkur, Kolar, Mandya, Hassan, and Mysore. The purpose of the plan will be to provide an overall strategy for integrated urban development in the subregion. It has also been agreed with the State Government that, based on this conceptual plan, a more detailed plan clearly indicating the land use and transport framework will be prepared for the core area of the subregion namely, the Bangalore urban and rural districts and Malur, a subdistrict of Kolar district presently forming the jurisdiction of the Bangalore Metropolitan Region Development Authority (BMRDA).

### **IV. THE PROJECT**

#### **A. Rationale**

26. Karnataka State is one of the relatively more urbanized States in India. Its urban population in 1991 was 13.9 million or 31 percent of the total population. Between 1981 and 1991, the urban population grew at a rate of 2.6 percent. About one third of the urban population are below the poverty line. Bangalore, the State capital with a population of about 4.7 million, has in recent years been one of the fastest growing industrial and metropolitan areas in the country. Because of its locational advantages, including favorable climatic conditions, and the availability of good physical infrastructure, the city has been the recipient of large local and foreign investments over the past 20 years, with increasing outlay since 1991 when the Government started its economic liberalization program. Bangalore has now become the center of India's high technology industries that include solid state electronics, telecommunications, aerospace industries, and computer software development. This rapid expansion of industrial

activities and the increased migration of people from the rural areas and other parts of the country to Bangalore are placing considerable strain on the existing facilities in the city. The living conditions of the residents are deteriorating rapidly, urban poverty is rampant, and environmental problems are on the rise. The Government is committed to reducing the influx of migrants and urbanization pressures on Bangalore by, among other measures, developing growth centers through the provision of financial resources for infrastructure development and the adoption of policy incentives to affect relocation. It is in this context that the Government approached the Bank for assistance in devising an integrated urban development strategy for the Bangalore subregion and formulating a project that will develop selected "counter-magnet" urban locations and growth centers, thereby encouraging decentralization from Bangalore and reducing pressure on its urban infrastructure.

27. The criteria used for selection of counter-magnets and growth centers for upgrading under the Project are (i) their location vis-a-vis Bangalore, (ii) existing population and annual growth, (iii) quality of infrastructure facilities and related amenities available in the area, and (iv) the extent to which the locations proposed are self-contained urban areas. With these criteria, 11 towns were evaluated as counter-magnet urban locations and growth centers and ranked according to priority. This exercise resulted in the selection of Mysore as the only counter-magnet at present and Tumkur as a potential counter-magnet. It also identified Channapatna and Ramanagaram as high-priority growth centers. The four selected towns have high growth potential and are located within commuting distance to Bangalore. More details on the Project towns are in Appendix 3. Bangalore was excluded from the proposed project because (i) the State, using its own resources, is addressing the many infrastructure deficiencies, and (ii) the Overseas Economic Cooperation Fund (OECF) is supporting a large Water Supply Project, estimated to cost around \$300 million. These investments are expected to considerably improve the urban infrastructure facilities in Bangalore.

28. The Project will address the long-term objectives of the Government and the State for the sector (accessibility of basic services through coverage, sustainability, and cost recovery) and will assist the State to implement policy reforms, particularly those pertaining to sectoral capacity and financial constraints. The Project aligns with all of the Bank's strategic development objectives: (i) enhancing economic growth through improvement of infrastructure, (ii) increasing the value of human capital through better health and productivity, (iii) reducing poverty by providing basic services to those who lack such services, (iv) benefiting women through economic and social development, and (v) improving the management of natural resources by reducing waste.

## **B. Objectives and Scope**

29. The fundamental objective of the Project is to promote decentralization of population growth and economic activity from Bangalore by addressing the basic infrastructure deficiencies and related environmental aspects in selected urban areas in the Bangalore subregion, namely, Mysore, Tumkur, Ramanagaram, and Channapatna. The decentralization strategy proposed is interventionist in nature and is based on the development of self-contained "counter-magnet" urban locations and growth centers around Bangalore. By creating such alternative urban locations and growth centers with adequate facilities, it is anticipated that growth will be redirected and decentralized from Bangalore, thereby reducing urbanization pressures on the city.



30. Specifically, the Project envisages interventions in the following areas: environmental sanitation, road development, poverty reduction, industrial development, and housing. In addressing the poor environment and sanitation conditions in the four towns, the Project will meet their current deficiencies and future requirements in water supply, sanitation, solid waste management and storm water drainage. Investment in the road sector will upgrade and rehabilitate the main roads in the town centers, improve linkages between the town centers and expansion areas, upgrade and relocate truck and bus terminals where required, and support traffic management measures to ease congestion and also reduce road accidents. The poverty reduction program will consist of slum upgrading, low-income sanitation, development of residential sites for both natural growth and in-migration induced by economic investment, and establishment of women's training centers to train poor, unemployed women for gainful employment. Intervention in industrial development will facilitate industrial investment in the Project towns through the development of industrial sites and services, which are key requirements for effective counter-magnets.

31. Other objectives of the Project are (i) building up the capacity of ULGs and other sector institutions concerned to ensure the sustainability of urban investments, and (ii) providing financial assistance for housing to the low-income groups (LIGs)<sup>1</sup> of the community at affordable interest rates, through direct lending to a housing finance institution.

32. The Project consists of six parts: Part A: environmental sanitation, Part B: road improvement and truck and bus terminals, Part C: poverty reduction, Part D: development of industrial sites and services, Part E: implementation assistance and institutional strengthening, and Part F: low-income housing finance. The identification and design of the Project components are based on the findings of a comprehensive socioeconomic survey of the four towns. Various local groups and nongovernment organizations (NGOs) were involved in identifying the deficiencies in the existing facilities and services, and also in assessing the scope of the improvements needed. A more active involvement of these local groups and NGOs is envisaged during detailed design and implementation of the Project. The scope of each part is briefly described below.

### **1. Part A: Environmental Sanitation**

33. The environmental sanitation component comprises augmentation of the water supply, rehabilitation and expansion of sewerage systems, solid waste management programs, and comprehensive storm water drainage and sullage disposal schemes for the four towns.

- (i) A new water supply system, designed to supply 90.8 million liters per day (mld), will be provided at Mysore to augment the currently inadequate supply. The existing water supply at Ramanagaram is also inadequate. In the case of Channapatna, there is no piped water supply at present. Ramanagaram and Channapatna are only about 10 km apart. As the source of water will be the same for both, a combined water supply scheme with a design capacity of 25.0 mld will be provided for the two towns. No scheme is proposed for Tumkur, except for certain urgently needed minor improvements to the existing system such as pipe

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<sup>1</sup> LIG - Currently defined as income of less than Rs2,650 (\$88) per month. This amount is adjusted each year by the Consumer Price Index.

and leak detection study, replacement of old pipes in the city center, and rehabilitation of the existing treatment plant, because a new water supply scheme for the town is already being implemented with State financing.

- (ii) Solid waste management will be improved and extended in all the four towns, and the role of the private sector, which is already involved in garbage collection in some areas, will be expanded. Necessary collection and disposal equipment will be provided under the Project. Further, labor-intensive composting plants will be introduced on a pilot basis at Tumkur, Ramanagaram, and Channapatna as the rural hinterland of these towns will provide a market for compost. Because of the relatively large size of Mysore, making fuel pellets from the garbage collected is a viable proposition as is already done in some towns in Karnataka. Therefore, a fuel pellet plant at Mysore has been included in the Project.
- (iii) The existing sewerage system in Mysore will be rehabilitated and extended, and a new treatment plant will be provided. Tumkur, which has no sewerage system at present, will be provided with a new underground sewerage system together with a treatment plant. The sewerage system in Ramanagaram, which presently has no treatment plant, will be provided with a suitable new treatment plant. The need for an underground system in Channapatna will arise only after the proposed water supply scheme for the town is in place and hence has not been included in the Project.
- (iv) A master plan for storm water drainage and sullage disposal will first be prepared for the four towns. This will be based on a detailed assessment of the extent and frequency of flood damage to prioritize areas where flooding or damage due to poor drainage is most severe. The production of the drainage master plan will be combined with a survey to identify environmental hazards and possible mitigating measures. Following the preparation of the master plan, the main and secondary drains, into which the existing tertiary drains built by ULGs or community-based organizations (CBOs) can be connected, will be designed and constructed. A maintenance program for the drainage system, including assessment of manpower requirements and costs, will also be prepared.

## **2. Part B: Road Improvement and Truck and Bus Terminals**

34. Although the main thrust of this component is improvement of roads in the four towns, it also provides for traffic management measures and construction of bus and truck terminals.

- (i) The total length of roads to be covered under the Project is about 190 km. Except for a few stretches that will be newly constructed, the majority of the Project roads are existing ones that will be rehabilitated, strengthened, and widened, as necessary. The associated roadside drainage and culvert works are included in the Project and will be integrated with the storm water drainage improvement. Further, the traffic situation in each of the towns will be studied and, based on the findings, suitable traffic management measures will be undertaken to ensure better flow of traffic.

- (ii) A new truck terminal will be constructed in Mysore to reduce indiscriminate parking of trucks throughout the town and traffic congestion in the town center. For similar reasons, a new truck terminal will also be constructed in Tumkur. Further, an existing bus stand in Ramanagaram will be relocated as the present location is in a congested area.

### **3. Part C: Poverty Reduction**

35. This component comprises slum upgrading, low-income household sanitation, development of residential sites, and provision of facilities for developing the skills of women.

- (i) The 31 slum areas spread over the four towns will be provided with basic necessities like water supply, electricity connection, sanitation and drainage facilities, solid waste disposal facilities, roads and street lighting. A community management approach will be followed with NGOs and CBOs acting as key facilitators of the process.
- (ii) About 23,700 low-cost sanitary latrines will be provided to low-income households in the four towns to replace their unsanitary latrines or for use where no facilities exist at present. Implementation will follow the procedures effectively used by the United Nations International Children's Emergency Fund (UNICEF) and NGOs working on low-cost sanitation in India.
- (iii) A total of about 252 hectares (ha) of land in the Project towns will be developed for residential purposes with roads, water supply, and drainage and sanitation facilities. The majority of the sites developed (about 65 percent) will be allocated to LIGs in the community at prices affordable to them. The concept of cross-subsidization will be followed to ensure full cost recovery. The balance of 35 percent will be allocated to middle-income groups.
- (iv) A cultural-cum-commercial complex and training center will be constructed at Ramanagaram.<sup>1</sup> The center will have a community hall for cultural activities and a few commercial shops, but emphasis will be on providing facilities for women to develop their skills for income-generating activities. This will be a financially viable and self-supporting scheme. A training center will be set up in Tumkur to train women, particularly distressed women with no means of support, in specialized skills, such as weaving of woollen yarn carpets. After training for each batch (20 trainees) is completed, the trained women will be given a loan by the District Administration for the purchase of weaving looms and initial raw materials. The supply of raw material and marketing of the finished product will be taken care of by NGOs.

### **4. Part D: Development of Industrial Sites and Services**

36. Mysore currently has more than 400 ha of developed industrial sites. In Channapatna also, land has recently been acquired for small-scale industries and its

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<sup>1</sup> Mysore and Channapatna already have adequate facilities for cultural activities and training.

development is under way. Therefore, under the Project, industrial sites will be developed only in Tumkur (80 ha) and Ramanagaram (10 ha). As in the case of residential sites, development will include provision of roads, water supply, drainage, and sanitation facilities. No cross subsidy will be necessary and all sites in a given location will be priced to recover full development costs. However, within the developments, some areas will be allocated for open space/landscaping and other social infrastructure, including housing for the industrial workers.

## **5. Part E: Implementation Assistance and Institutional Strengthening**

37. The provision for implementation assistance covers Project management costs, including the costs related to incremental staffing and operation of the Project Management Unit (PMU) and the Project Implementation Units (PIUs), equipment, logistic and other support as well as the costs of consulting services. The international consulting services to be provided will be the minimum needed to ensure smooth implementation and management of the Project.

38. ULGs will be the main focus of the institutional strengthening component. This will involve (i) improving staff resources by training personnel through on-the-job and formal training which will include short courses in urban planning and management overseas in the Asian and Pacific Region, for a small number of staff associated with implementation and operation of the Project; (ii) providing ULGs and KUWSDB with basic equipment required for urban management; and (iii) preparing a conceptual plan for the integrated development of the Bangalore subregion, comprising Bangalore Urban and Bangalore Rural, Tumkur, Kolar, Mandya, Hassan, and Mysore districts, to be followed by a more detailed plan for the Bangalore Urban and Rural districts and Malur, a subdistrict of Kolar district.

## **6. Part F: Low-Income Housing Finance**

39. There is a shortage of housing finance particularly for low-income households in India. The Central Government has requested the Bank to provide a loan of \$20 million for housing finance on a pilot basis. It requested that this provision be channeled through a private sector institution. The Housing Development Finance Corporation (HDFC), given its excellent record in the management of housing finance, was selected by the Central Government as the institution through which the funds for this Project component should be channeled. HDFC is a publicly listed private sector housing finance institution. It has headquarters in Bombay, but operates throughout India.

40. Under the Project, a loan of \$20 million to HDFC will provide housing finance mainly to LIGs in the Project towns as well as other selected areas within the Bangalore subregion, at affordable interest rates without any form of external subsidy, to promote home ownership among them. HDFC will implement this component through NGOs and CBOs acting as intermediaries for onward lending. At least 50 percent of the loan will go to LIG households at an interest rate applicable to LIG from the National Housing Bank (NHB)<sup>1</sup> and the balance to middle-income households at market rates. Loans to LIGs and the middle-income groups will be limited to 85 percent of the value of the property, with overall property value not exceeding Rs900,000 for any one mortgage. HDFC will secure the loan through a first mortgage on the

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<sup>1</sup> The current interest rate for LIGs from NHB is 12.5 percent for loans of less than Rs25,000 and 15 percent for loans in excess of Rs25,000 but less than Rs100,000.

property financed. Low-cost techniques and local building materials will be used to keep the construction costs low and keep the units affordable. With this line of credit, it will be possible to provide home ownership to more than 5,000 LIG families in the four Project towns (see Appendix 4 for more details on this component).

### **C. Technical Justification**

41. All the Project towns suffer from water shortages, while high system losses have also been identified as a problem in the aging systems. In Tumkur, a large water supply scheme that will augment the existing supplies is under way; hence, no new scheme is proposed. There is, however, an urgent need to augment the existing supplies in Mysore, Ramanagaram, and Channapatna and for extending the distribution system to new residential and industrial areas under development or planned for development in these towns. The proposed pipe and leak detection studies in all the four towns will help in identifying the pipes for replacement and in reducing water wastage. Further, public awareness programs will be formulated and implemented to encourage recipients to conserve water. The water revenue collection efficiencies of ULGs and their O&M capabilities will be improved by training personnel and operationalizing the appropriate management and financial action plans. In low-income areas, the water supply provision will be community based. CBOs or user groups will be formed, with NGOs providing technical support and enabling assistance to the beneficiaries who will be responsible for their own O&M and water tariff collection arrangements.

42. The solid waste management program concentrates on developing for the towns a strategy aimed at improving service to all urban dwellers, disposing of waste in a sanitary manner, and achieving some form of cost recovery. The strategy will focus on the "reduce, reuse, and recycle" philosophy, involving the private sector to the extent feasible. The main impetus of the program will be on the organizational and institutional aspects of waste disposal, including training of ULG solid waste management staff and maximizing potential cost recovery. Steps will also be taken to increase public awareness of the environment and the importance of solid waste disposal in a sanitary manner. The program requires the deployment of collection and disposal equipment. Necessary site infrastructure, including fencing and all-weather access roads, will be provided at the disposal sites. Further, a plant at Mysore for making fuel pellets from solid wastes and also a compost plant each at Tumkur, Ramanagaram, and Channapatna will be provided under the Project.

43. The sewerage system in Mysore catering to most areas of the city was originally built in 1911. The system needs rehabilitation in the core area and extension to new residential areas. Further, the conventional-type primary treatment unit of Mysore constructed in 1958 is outdated and needs replacement. Tumkur has no sewerage system; therefore, an underground sewerage system with a treatment plant to serve the core area of the town and key residential areas is urgently needed. Although Ramanagaram has a sewerage system, it has no treatment plant and hence needs one. The storm water drainage and sullage disposal facilities available in all the Project towns are minimal and totally inadequate; improvement of these facilities under the Project is required.

44. Urban roads in the Project towns are in extremely poor condition. To rectify this situation proposals for improvement of the road network in the four towns have been formulated. They will entail (i) rehabilitation of existing roads, involving resurfacing and, in some cases, reconstruction; (ii) upgrading of existing roads, by widening and strengthening some main roads

and bitumen surfacing of some of the minor ones; and (iii) extending the existing road system to improve linkages to expansion areas, or to provide access to new industrial areas. The implementation of these proposals as well as the traffic management measures and the proposed bus and truck terminals will significantly improve the road network and traffic movement within the towns.

45. The poverty reduction elements of the Project, though not directly improving economic conditions in the towns, will greatly improve the environment and provide better living conditions to the LIG sections of the community which will provide the bulk of the work force for industrial and other development activities within the towns. The development of industrial sites proposed in Tumkur and Ramanagaram will attract industries to these sites, which will lead to partly achieving the Project objectives. Further, the housing component of the Project will enable LIGs of the Project towns to acquire their own houses at affordable interest rates and to improve their living conditions.

#### **D. Cost Estimates**

46. The total cost of the Project, including physical and price contingencies, duties, taxes, and interest and other charges during construction on the Bank loan, is \$132 million equivalent. Foreign exchange costs, including indirect foreign exchange costs, amount to \$36.0 million or 27.3 percent of the total. The local currency costs, including duties and taxes, amount to \$96.0 million equivalent or 72.7 percent of the total. The cost estimate is summarized in Table 1. A more detailed cost estimate is in Appendix 5.

**Table 1: Summary of Project Costs**  
(\$ million)

Item	Foreign	Local	Total
<b>1. Base Cost<sup>a</sup></b>			
Part A: Environmental Sanitation			
(i) Water Supply	3.5	11.9	15.4
(ii) Solid Waste Management	0.3	1.0	1.3
(iii) Sewerage	4.4	14.7	19.1
(iv) Storm Water Drainage	<u>0.3</u>	<u>1.0</u>	<u>1.3</u>
Subtotal	8.5	28.6	37.1
Part B: Road Improvement and Truck and Bus Terminals			
(i) Road Improvements	3.0	8.2	11.2
(ii) Truck & Bus Terminals	<u>0.3</u>	<u>1.3</u>	<u>1.6</u>
Subtotal	3.3	9.5	12.8
Part C: Poverty Reduction			
(i) Slum Upgrading	0.1	0.3	0.4
(ii) Low Income Sanitation	0.4	1.0	1.4
(iii) Residential Sites and Services	2.5	11.8	14.3
(iv) Cultural/Women's Training Centers	<u>0.1</u>	<u>0.4</u>	<u>0.5</u>
Subtotal	3.1	13.5	16.6
Part D: Industrial Sites and Services	0.8	4.8	5.6
Part E: Implementation Assistance and Institutional Strengthening			
(i) Consulting Services <sup>b</sup>	1.7	3.0	4.7
(ii) Administration and Incremental O&M	0.3	1.8	2.1
(iii) Institutional Support	<u>0.6</u>	<u>0.8</u>	<u>1.4</u>
Subtotal	2.6	5.6	8.2
<b>Subtotal</b>	<b>18.3</b>	<b>62.0</b>	<b>80.3</b>
<b>2. Contingencies</b>			
(i) Physical <sup>c</sup>	3.2	7.5	10.7
(ii) Price <sup>d</sup>	1.6	6.5	8.1
<b>Subtotal</b>	<b>4.8</b>	<b>14.0</b>	<b>18.8</b>
<b>3. Part F: Low Income Housing</b>	-	20.0	20.0
<b>4. Interest During Construction<sup>e</sup></b>	12.5	-	12.5
<b>5. Partial Repayment of Cost of TA 1977-IND</b>	0.4	0.0	0.4
<b>TOTAL PROJECT COST<sup>f</sup></b>	<b>36.0</b>	<b>96.0</b>	<b>132.0</b>

## Notes:

<sup>a</sup> At June 1995 prices.<sup>b</sup> Excluding consulting services for the Bangalore Subregional Plan which is covered under Item 1 Part E (iii)<sup>c</sup> Physical contingencies have been applied at 10 percent for civil works, equipment and institutional strengthening components and 15 percent for land acquisition and consulting services.<sup>d</sup> At 3.1 percent a year for foreign and local costs.<sup>e</sup> Does not include interest on housing finance line of credit.<sup>f</sup> Includes duties and taxes estimated at \$6.6 million.

## E. Financing Plan

47. The Government requested the Bank to provide two loans totaling \$105 million from its ordinary capital resources representing approximately 80 percent of the total Project cost. The Borrowers will be the Republic of India for \$85 million and the HDFC for \$20 million. The loan of \$85 million to India is proposed to finance the entire foreign exchange cost of \$36 million (including interest and other charges during construction on the Bank loan) and \$49 million equivalent of local currency costs. The local cost financing is proposed to cover part of the costs relating to equipment, consulting services, and civil works, all excluding duties and taxes. Incremental costs relating to the proposed Project Management Unit and Project Implementation Units and the incremental operation and maintenance costs during Project implementation, excluding duties and taxes, are also envisaged to be financed on a declining basis. The loan of \$20 million to HDFC, which will be guaranteed by the Government, will be a credit line directly given to HDFC by the Bank to provide housing loans, to low-income and middle-income groups.

48. Of the remaining cost of \$27.0 million equivalent not covered under the Bank loan, the State will meet \$19.3 million equivalent from its own resources, and ULGs and other institutions concerned will meet \$7.7 million equivalent from their resources. The proposed financing plan is summarized in Table 2.

**Table 2: Proposed Financing Plan  
(\$ million)**

Item	Foreign Exchange Cost	Local Currency Cost	Total	Percent
1. Bank Loan to India	36.0	49.0	85.0	64.4
2. Bank Loan to HDFC	-	20.0	20.0	15.2
3. Government of Karnataka	-	19.3	19.3	14.6
4. Equity by ULGs and other institutions (in kind/land) <sup>a</sup>	-	7.7	7.7	5.8
<b>Total</b>	<b>36.0</b>	<b>96.0</b>	<b>132.0</b>	<b>100.0</b>

<sup>a</sup> Karnataka Urban Water Supply and Drainage Board (\$1.8 million); Karnataka Industrial Area Development Board (\$1.5 million); Mysore City Corporation (\$0.3 million); Tumkur Municipality (\$0.02 million); Ramanagaram Municipality (\$0.6 million); Channarayana Municipality (\$0.3 million); Mysore Urban Development Authority (\$2.0 million); and Tumkur Urban Development Authority (\$1.2 million).

49. The proposed Bank loans to India and HDFC will be for a period of 25 years, including a grace period of 5 years, at the Bank's variable interest rate. The Central Government will onlend the proceeds of the Bank loan to India, excluding the interest during construction in local currency equivalent, to the State on standard terms and conditions set by the Central Ministry of Finance for foreign aided projects. The foreign exchange risk for the two loans will be borne by the respective Borrowers, namely, India and HDFC. The Government of Karnataka State will relend about \$62 million relating to water supply and sewage, road improvement



(excluding those under the Public Works Department), solid waste management, bus and truck terminals, residential and industrial sites, and services development to the relevant State agency responsible for the implementation of that subcomponent. The relending will be through a Subsidiary Loan Agreement or through a State order specifying the conditions under which relending is done and will be for a term of 25 years, including a grace period of 5 years at an interest rate of 12 percent per annum. The balance of the funds, about \$10.5 million for the drainage, road improvement (by Public Works Department), slum upgrading, low-income sanitation, and institutional strengthening components will be provided to the local authorities as budgetary allocations.

## **F. Implementation Arrangements**

### **1. Executing Agencies**

50. The Executing Agency for the Project, except for the low-income housing component, will be the Department of Housing and Urban Development (DHUD), through its newly created Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC). A small-scale TA<sup>1</sup> recently approved by the Bank will provide some critical front-end capacity building support to KUIDFC to enable it to assume responsibility for executing foreign-aided projects in the Bangalore subregion. For the low-income housing component, the Executing Agency will be the Housing Development Finance Corporation (HDFC).

#### **a. Department of Housing and Urban Development**

51. DHUD is responsible for all matters related to housing, water supply, and sanitation, as well as urban planning, development and administration in Karnataka. Besides all ULGs which come under its administrative jurisdiction, DHUD has a large number of operational agencies including the Karnataka Urban Water Supply and Drainage Board, Directorate of Municipal Administration, Karnataka Housing Board, Department of Town Planning, Bangalore Metropolitan Region Development Authority, Karnataka Slum Clearance Board, and the Karnataka Urban Infrastructure Development and Finance Corporation (KUIDFC). Through these agencies, DHUD has successfully implemented a large number of water supply and sanitation projects, housing schemes, slum upgrading, and various other urban development works in the State. Its role has been mainly as an apex body formulating all policies for the sector, and coordinating and directing the activities of the various agencies under its charge.

#### **b. Housing Development Finance Corporation**

52. HDFC is a publicly listed private sector housing finance institution established in 1977. It is based in Bombay and has branches all over India. HDFC's authorized share capital is 13 million shares at a par value of Rs100 each; as of March 1995, its paid-up capital was Rs1,012 million (\$32.6 million) and reserves were Rs7,736 million (\$249 million). HDFC is currently the largest originator of housing loans in the private sector in India and over the last decade has emerged as a strong financial institution in the Indian capital markets. The primary objective of HDFC is to enhance the residential housing stock in the country by providing housing finance on a systematic and professional basis and to promote home ownership. To

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<sup>1</sup> T.A. No. 2368-IND: Institutional Strengthening of KUIDFC, for \$100,000, approved on 27 July 1995.

achieve this objective, HDFC raises funds from a variety of sources, including long-term loans from financial institutions and banks (both domestic and international), bonds and deposits. It has availed of a line of credit of \$250 million from the International Bank for Reconstruction and Development (IBRD), which was fully drawn in March 1991. It has also been receiving loans from the International Finance Corporation, Commonwealth Development Corporation, and Kreditanstalt für Wiederaufbau, Germany.

53. At the end of March 1995, HDFC's cumulative loan disbursements exceeded Rs56 billion (\$1.8 billion), financing about 730,000 housing units across India. It has conservatively managed its loan appraisal and recovery processes to keep arrears and defaults to a small proportion (less than 1 percent) of its outstanding portfolio. A summary of HDFC's past financial performance and other key results are given in Appendix 6.

54. HDFC is a professionally managed organization with a Board of Directors consisting of eminent persons representing various fields including finance, taxation, engineering, construction, and urban policy and development. It has three subsidiary companies: HDFC Developers Limited, Countryside Consumer Financial Services Limited, and HDFC Bank Limited. All the subsidiaries are performing well. Two other major areas where diversification is presently being considered by HDFC are insurance and real estate mutual funds.

## **2. Implementing Agencies**

55. HDFC will be directly implementing the low-income housing component of the Project with NGOs and CBOs acting as intermediaries. The Implementing Agencies (IAs) for the various other components of the Project are as follows:

<u>Implementing Agency</u>	<u>Project Component</u>
Karnataka Urban Water Supply and Drainage Board (KUWSDB)	All water supply and sewerage schemes
Karnataka Industrial Area Development Board (KIADB)	All industrial sites and services
Karnataka Slum Clearance Board	All slum upgrading work
Public Works Department (PWD)	All Project roads presently under PWD
Mysore Urban Development Authority (MUDA)	Outer ring road, truck terminal, and residential sites and services in Mysore
Tumkur Urban Development Authority (TUDA)	Southern bypass road, truck terminal, and residential sites and services in Tumkur
Mysore City Corporation	Solid waste management, storm water drainage and sullage disposal, road improvement (except MUDA roads) traffic management, and low-income sanitation in Mysore

Tumkur Municipality	Solid waste management, storm water drainage and sullage disposal, road improvement (except PWD and TUDA roads) and traffic management, low-income sanitation, and women's training center in Tumkur
Ramanagaram Municipality	Solid waste management, storm water drainage and sullage disposal, road improvement (except PWD roads), traffic management, bus stand relocation, low-income sanitation, residential sites and services, and cultural-cum-commercial and training center in Ramanagaram
Channapatna Municipality	Solid waste management, storm water drainage and sullage disposal, road improvement (except PWD roads) traffic management, low-income sanitation and residential sites and services in Channapatna
Bangalore Metropolitan Region Development Authority (BMRDA)	Conceptual plan for Bangalore subregion and detailed plan for Bangalore urban and rural districts and Malur subdistrict of Kolar district

(NGOs and CBOs will be associated with the implementation of the low-cost sanitation component).

### **3. Project Organization and Management**

56. The State has established a PMU and appointed a Project Director. Key staff of PMU have also been appointed. Other PMU staff will be appointed over time as the Project implementation gains momentum. PMU will be involved in coordinating and managing the Project activities including Project design, implementation, budgeting and financial planning, benefit monitoring and evaluation (BME) activities, socioeconomic surveys, environmental assessments and protection, institutional and policy development, and community participation activities. The staff of PMU will include experts in urban planning and engineering, accounting, economics, community development, and sociology. PMU will also be responsible for coordinating all consulting services under the Project. To support PMU, PIUs will be set up, one each in Mysore and Tumkur and one at Ramanagaram for both Channapatna and Ramanagaram, within two months of loan effectivity.

57. For preparation of the conceptual Bangalore subregional plan and the detailed plan for the core area of the subregion, a Planning Unit will be established within BMRDA. A wide range of technical expertise will be required for the preparation of this plan, involving staff resources from the State and local governments, supported, as necessary, by international and domestic consultants. The main complement of the planning team will be senior staff seconded

from different Government departments and agencies. Preparation of the subregional plan will be directed by a Steering Group under the chairmanship of the State's Chief Minister or his nominee. The members of the Group will include representatives of all departments and major agencies of the Central and State Governments with significant involvement in the subregion as well as some elected members of the State legislature from the area.

58. Within three months of the effective date of the Loan, a high-level Project Steering Committee will be established by the Ministry of Urban Affairs and Employment (MUAEE) under the chairmanship of the Joint Secretary of MUAEE. The Committee will consist of federal and State Government representatives involved in Project implementation, including HDFC. The Committee will review and coordinate the overall Project program, including policy aspects, and provide guidance toward orderly Project implementation.

59. For speedy decision making on all Project components irrespective of their costs, the State has approved, at the suggestion of the Appraisal Mission, the establishment of an Empowered Committee under the Chairmanship of the Additional Chief Secretary to the Government of Karnataka. It is envisaged that the Committee to be appointed by 31 December 1995 will comprise senior representatives of all Project agencies. The State Cabinet has given the Committee full authority as regards all Project implementation matters, including the appointment of consultants and awarding of contracts. The low-income housing finance component will be administered separately by HDFC. HDFC will implement this component, through its branch office in Bangalore. It will set up a separate dedicated unit within its branch to administer this component. HDFC will maintain a separate set of records for all mortgage lending made to beneficiaries from funds provided under the Project. At the end of each quarter, HDFC will prepare a detailed report of the activities pertaining to this component and submit the same to PMU for inclusion in the quarterly report to the Bank.

#### **4. Implementation Schedule**

60. The Project is planned to be implemented over a period of six years from January 1996 to December 2001. An implementation schedule for the Project is presented in Appendix 7. To minimize start-up delays, advance action for recruitment of consultants has commenced. Further, land acquisition requirements have been minimized and a detailed time-bound program for land acquisition has been established and agreed upon with the State Government during appraisal of the Project. This will ensure that land acquisition will not hold up any work (see para. 65).

#### **5. Procurement**

61. Procurement of goods and services financed by the Bank will be in accordance with the Bank's *Guidelines for Procurement*. As the contracts for civil works are expected to be small in size and scattered in different locations, it is unlikely that international contractors will be interested in bidding; hence, contracts for civil works will be awarded using local competitive bidding procedures. Prequalification of local contractors will be carried out using the State Government's prequalification procedures (including its practice of registering contractors on the basis of classification), which have been examined by the Appraisal Mission and found to be acceptable. Procurement of equipment costing in excess of \$500,000 will be carried out using international competitive bidding procedures. Procurement of service vehicles and equipment in an amount in excess of \$50,000 but below \$500,000 will be through international shopping

procedures. For less than \$50,000, direct purchase procedures will be used. Indicative contract packaging is presented in Appendix 8.

## **6. Consulting Services and Training**

62. Consultants will be required to assist DHUD in the design and implementation of the Project. For efficient operation and to realize maximum benefits from the consultants, it is proposed to have three groups of consultants under the Project: one for Project management, including training, the second for detailed design of the Project components and construction supervision, and the third for the preparation of the Bangalore subregional plan. For Project management, it is proposed to engage an international consulting firm, well experienced in urban development works and contract management, which may associate with a suitable domestic consulting firm or individuals in carrying out the services. The design and construction supervision package will be split into two, one for the Mysore works as over 50 percent of the total Project cost is associated with that city and the other for the works in Tumkur, Ramanagaram, and Channapatna. Two domestic consulting firms with adequate expertise in the urban development field will be engaged to carry out the required services for design and construction supervision. It is envisaged that about 77 person-months of international consultants and 12 of domestic consultants will be required for Project management, primarily in an advisory and support capacity to PMU. The proposed international consultants input is the minimum required for Project management. For design and construction supervision, the estimated requirement of services by domestic consultants will be about 783 person-months. In addition, 20 person-months of international consultants and 86 of domestic consultants will be required for preparation of the Bangalore Subregional Plan. All international consultants will be engaged in accordance with the Bank's *Guidelines on the Use of Consultants*. Domestic consultants will be recruited following procedures acceptable to the Bank. The outline terms of reference for all consulting services are given in Appendix 9.

## **7. Disbursement**

63. The proposed Bank loan of \$85 million to India will be disbursed to finance the foreign exchange cost of the Project amounting to \$36 million, plus \$49 million equivalent in local currency cost (72 percent of local currency cost of the Project) to meet part of the local expenditures, excluding duties and taxes for civil works, equipment, consulting services, and incremental operating costs on a declining basis. The proposed Bank loan of \$20 million to HDFC for implementing the low-cost housing component will be disbursed in tranches equivalent to nine months anticipated subloans through an imprest account (see para. 64). The tranches will be of a size large enough to enable HDFC to make satisfactory arrangements to hedge its foreign exchange risk through swap arrangements. Such a swap arrangement is expected to reduce the cost of capital to HDFC. Savings resulting from these financing arrangements will enable HDFC to accommodate a larger percentage of low-income group in its lending portfolio under the Project.

## **8. Imprest Fund Account**

64. The Central Government has requested the Bank to allow disbursement of loan proceeds for local cost expenditures for the Loan to India through the Bank's imprest account procedures and the disbursement of minor expenditures through the use of the Bank's statement of expenditure procedures. The Bank has agreed to disbursement of minor local cost expenditures

through the Bank's statement of expenditure procedures, in accordance with the Bank's *Guidelines on Imprest Fund and Statement of Expenditure Procedures* (November 1986) as amended from time to time. As regards the Central Government's request to use imprest fund account for disbursement of local cost expenditures for that Loan, the Bank has agreed in principle to allow this facility. However, the Bank's past experience on the use of imprest fund account in India for public sector projects has been problematic and the Bank had to discontinue its use. The Controller's Department is currently examining, in consultation with the Central Government, ways of resolving the problems experienced in the past. Following the resolution of these problems, it is envisaged that the use of the imprest fund account facility will be allowed for the disbursement of local cost expenditures under the Project. In that event, the Central Government will allow KUIDFC to open a separate bank account to which the rupee equivalent of six months' estimated Project expenditures for local costs will be deposited for the sole use of the Project. As regards the Loan to HDFC, the Bank has agreed to allow the use of imprest fund procedures. The Government will facilitate the use of this procedure for HDFC. In this regard, it will allow HDFC to open an account with the Reserve Bank of India (RBI) for this purpose.

## **9. Land Acquisition**

65. About 711 ha of land are needed for the Project; about 96 ha either have been acquired or are already in the possession of the IAs. Acquisition of the balance is under way and is expected to be completed by June 1996. A time-bound land acquisition program agreed upon with the State is given in Appendix 10. An estimated \$7.7 million equivalent will be required to meet the costs of land acquisition, property compensation, and resettlement costs. These costs are included in the Project cost estimate. The State has confirmed that adequate allocations will be made in the annual budgets to cover the cost of acquisition, compensation, and resettlement.

66. Based on preliminary design, it is estimated that about 160 households may require to be permanently relocated. Households from whom land and property will be acquired will be fully compensated in accordance with the established land acquisition procedures of the State with, wherever necessary, land and buildings being acquired on the basis of a negotiated price. Households that have to be relocated, including those without legal tenure to the land on which they are living, will be provided with a compensation package comprising alternative housing or serviced sites or cash. Where appropriate, displaced households will be resettled as priority beneficiaries at the sites and services scheme nearest to their current location. Other households that will have to relocate temporarily during implementation of slum upgrading will be resettled, with tenure, in their current location after upgrading is completed. During the socioeconomic survey under the project preparatory TA, communities on whom the Project will impact were consulted on aspects of the Project, including their possible relocation. The communities indicated their willingness to relocate on payment of adequate compensation. A detailed resettlement plan based on the Bank's draft guidelines on resettlement and incorporating data on individual households affected, the amount of land and property involved, compensation due, details of consultations with affected households, and proposals for monitoring of relocation will be prepared after detailed engineering surveys have been completed and the precise requirements for relocation identified. The resettlement plan will be submitted to the Bank for approval. The State has been informed that the Bank will have the right to refuse financing any component if the Bank is not satisfied with the land resettlement plan pertaining to that component.

## **10. Midterm Review**

67. In addition to the regular annual reviews to be undertaken during the Project implementation period, the State, the Executing Agencies, and the Bank will jointly carry out a comprehensive midterm review within about three years from loan effectiveness. The objectives are to: (i) review the progress achieved relative to the targets set for each component; (ii) reexamine the Project design, implementation arrangements, and other relevant aspects; and (iii) formulate, within the updated sector setting and other changing circumstances at the time of the review, any necessary course of action to be taken by the State, HDFC, and the Bank to ensure successful Project implementation, achievement of the Project objectives, and sustainability of Project benefits. The need for the review and its scope as well as the objectives have been agreed upon with the Central and State Governments as well as with HDFC.

## **11. Reports, Accounts, and Audit**

68. The State will provide the Bank with quarterly progress reports on Project implementation. The reports from all IAs including HDFC will be consolidated by PMU. PMU will particularly address the institutional and policy development aspects of the Project. The progress reports will be in such form and detail as the Bank may reasonably require and will include information on the physical progress of works and status of related organization and financial matters. The State will also submit to the Bank within three months of the physical completion of the Project, a project completion report (PCR) that will cover the details of Project implementation, costs, BME activities at that time, and other information requested by the Bank.

69. The Project Director of PMU will establish and maintain accounts and records in such a manner as to facilitate identification of income and expenditures related to the Project. Further, to ensure that Project funds are utilized exclusively for the Project, the amount allocated for each component except for the low-income housing finance component will be kept in a dedicated bank account to be jointly operated by the designated officer of the IA concerned and the Project Director. The funds provided by the Bank for the low-income housing component will be managed by HDFC, which will keep a proper record of all mortgages given, including the amount and the security or collateral held for each mortgage. HDFC will provide this information to PMU at the end of each quarter for inclusion in the quarterly report to the Bank. All the accounts and statements of expenditures and revenues will be audited annually by auditors acceptable to the Bank. Audited Project accounts, together with the report of the auditor, will be submitted to the Bank within 12 months of the close of the financial year. The auditor's opinion on the imprest fund account and the statement of expenditure procedures will be separately set out in the auditor's report. HDFC accounts and financial statements will be separately audited by auditors acceptable to the Bank and reports submitted to the Bank within six months of the close of the HDFC financial year.

## **12. Benefit Monitoring and Evaluation**

70. To ensure that Project facilities are managed efficiently and that the benefits reach the target groups, a BME program is included under the Project. This program will monitor the delivery of services anticipated and will measure benefits as they accrue. To particularly measure the health and social benefits resulting from the Project, a sociologist will be among the key staff of PMU who will carry out periodic social surveys to determine the changes in key social indicators over time, including health, welfare, economic and physical conditions. Key indicators

that will be monitored have been formulated and agreed upon with the State. They include indicators pertaining to water supply improvements, public health, movements in property values, and operational efficiency of ULGs. PMU will submit a detailed implementation plan for monitoring benefits and for preparing benchmark information for the Bank's review and concurrence within six months of loan effectiveness. The Bank, the State, and HDFC have agreed on the scope of the proposed BME.

## **G. Environment and Social Measures**

### **1. Environment**

71. An initial environmental examination (IEE), carried out for each Project component, showed that no significant adverse effects are anticipated and that a detailed environmental impact assessment is not required. This is mainly because of the generally poor environmental conditions in the Project area at present and the fact that improvements in environmental sanitation are given a high priority under the Project. Temporary adverse effects during construction will be controlled and minimized by ensuring that design and construction management are approached in an environmentally sensitive manner, particularly in relation to land clearances, excavation, soil disposal, and temporary works.

72. The environmental benefits of the Project will be enhanced and sustained through active community involvement, education programs for beneficiaries (particularly in relation to environmental sanitation), training programs for Government officials to improve their awareness of the need for improved O&M of Project facilities, and through appropriate regulations and control measures in relation to environmental sanitation. DHUD will widely disseminate information about the Project and consult with community user groups to ensure that their views are taken into account in Project implementation. The environmental classification of the Project is category B.

### **2. Social Analysis**

73. Social impact assessments were prepared for each Project town and for each Project component as part of the feasibility study. Socioeconomic profiles were prepared for various target groups of beneficiaries including women and poor communities. Beneficiaries were consulted on various aspects of Project design, affordability, willingness to pay for services and operations of facilities following construction to optimize Project benefits and ensure Project sustainability. The findings indicated a clear need for the Project and the communities' strong support for the improvement of their urban infrastructure facilities. A comprehensive socioeconomic survey carried out during the project preparatory TA, and subsequently confirmed by the Appraisal Mission, revealed that over 70 percent of the beneficiaries in the Project towns are from low-income households.

74. The Project is expected to have a positive social impact and a high community involvement. Improvements in the infrastructure facilities of the Project towns, specifically in environmental sanitation, will contribute to the overall social well-being of residents. Women and children will benefit significantly from the improvements in water supply and environmental sanitation facilities because water collection, cooking, washing and household cleaning, including the maintenance of latrine facilities, are tasks traditionally undertaken by women. Slum upgrading and other improvements will also benefit the many low-income women who are



involved in home-based income-generating activities such as making beedi (traditional cigarettes) or incense sticks.

75. Other positive social impacts of the Project will include the creation of employment opportunities, both directly through the Project (which is expected to generate about 200,000 person-months of employment during the construction phase, and about 15,000 person-months per annum for O&M of facilities once completed) and indirectly through the creation of about 10,000 full-time jobs anticipated as a result of the establishment of the industrial estates in the Project area.

## **H. Technical Assistance**

76. In conjunction with the loans, an advisory TA for a resource mobilization study for ULGs will be provided. The proposed TA will assist the State to study the existing system of revenue generation and collection from both ULGs' own and shared taxes and propose ways and means for implementing an effective plan to progressively improve the financial strength of ULGs in Karnataka. The objective of this TA will be to prepare a comprehensive strategic plan for improving the financial resources of the Project town ULGs, which will recommend (i) appropriate steps for improving revenues from the following principal sources: property tax (tax on building and sites), user charges on municipal services, rent from properties, shared taxes such as motor vehicle tax, entertainment tax and various State Government cesses; and (ii) other innovative measures for enhancing local Government revenues. Following the implementation of the study's recommendations in the Project towns, the model that will be developed is envisaged to be replicated in other towns in Karnataka.

77. The Executing Agency for this TA will be KUIDFC, which will work in close consultation and collaboration with the State Finance Commission. A TA steering committee comprising representatives of all agencies involved in the revenue enhancement program will be set up to monitor the TA. The TA will be carried out over four months and will require 14 person-months of consulting services (6 international and 8 domestic), with expertise in municipal finance and urban planning. The cost of the TA is estimated at \$315,000, \$225,000 in foreign exchange and \$90,000 equivalent in local currency. It is proposed that the Bank finance the entire foreign exchange cost of \$225,000 and \$75,000 equivalent of the local currency cost. The local currency cost to be financed by the Bank will cover the remuneration of domestic consultants and support staff, survey and research costs, communication and vehicle costs. The TA provides for \$35,000 for a study tour and familiarization visit by officials of DHUD and KUIDFC who have been charged with responsibility for improving municipal financing. The study tour will be to countries within the Asian and Pacific Region which have in the recent past introduced successful cost recovery and other revenue enhancement programs. It will be organized and coordinated by the TA consultants. The State contribution of \$15,000 (in kind) will cover counterpart staff, office facilities, and other logistic support. The TA will be charged to the Bank-funded TA program. Outline terms of reference and the cost estimate for the TA are provided in Appendix 11.

## **I. Policy Issues**

78. Agreement in principle has been reached with the State on the following Project-related policy issues:

### **1. Staff Training**

79. There is a shortage of trained personnel in all disciplines at the local government level. A concerted effort needs to be made to rectify this deficiency in the interest of good administration of local government activities. In this regard under the Project, provision has been made for the Project management consultants to assist the State in developing a comprehensive training program that will be forwarded to the Bank for approval within nine months of loan effectivity. Following Bank approval, the program will be operationalized, utilizing funds provided specifically for this purpose in the Project.

### **2. Strengthening of the Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC)**

80. KUIDFC is expected to play a key role in implementing the proposed Project as well as other urban development activities in the State. As such, it has been agreed with the State that KUIDFC will be adequately funded and provided with experienced staff in the disciplines of management, planning, engineering, and finance.

### **3. Strengthening of Town Coordination Committees**

81. The existing town coordination committees will play a vital role in guiding and coordinating Project implementation. Since a large component of the Project will be implemented and operated by the local authorities and the community, it has been agreed that the town coordination committee membership will be expanded to include the elected mayor or chairman of the town and representatives of local communities and NGOs. Furthermore, a joint town coordination committee for Channapatna and Ramanagaram, which currently does not have such a committee, will be established. These modifications to the town coordination committee and the establishment of a town coordination committee in Channapatna and Ramanagaram will be accomplished within three months of loan effectiveness.

## **V. PROJECT JUSTIFICATION**

### **A. General**

82. The Project will support the need for urgent improvements in urban infrastructure in the four towns, improve the living and working conditions of the inhabitants, improve the urban environment and stimulate economic growth. It will directly benefit about 520,000 people of whom around 70 percent currently belong to low-income groups. Human development will be encouraged by the provision of basic urban infrastructure at affordable prices and the strengthening of critical municipal services. This will also contribute to the alleviation of poverty. Institutional gains will accrue to the sector through more effective urban management, improved resource mobilization, efficient financial management and more meaningful community participation. Many of the benefits which will accrue as a result of improvements to urban infrastructure and services under the Project, while intrinsically significant, are difficult to quantify as they relate to environmental and health improvements. The reduction of human contact with waste and lower levels of water and air pollution as a result of extended solid waste management services will lead to improved health and productivity. The reduction in garbage dumped in drains, along with their resectioning, widening and strengthening will reduce local flooding which

in turn will result in less damage to property and lower road maintenance costs. Better quality and more reliable drinking water supplies will bring significant health benefits while sanitation improvements will eliminate sullage ponding, reduce surface water pollution, including water-borne pathogens, and impact positively on public health.

## **B. Financial/Economic Analysis**

### **1. Financial Analysis**

83. Financial internal rates of return (FIRRs) have been calculated for each of the major revenue-generating subcomponents of the Project, namely the water supply and sanitation components in Mysore, and in Channapatna and Ramanagaram; the truck terminal in Mysore; the cultural-cum-commercial and training center in Ramanagaram; and representative industrial and residential sites and services schemes. In the case of the water supply components, the FIRR calculation has been based on assumptions about future tariff levels, which are assumed to be increased substantially from their present levels but within the limit of affordability. For the truck terminal in Mysore, the revenue stream assumed in the FIRR calculation is based on the estimated value and pattern over time of sales and leases of sites and facilities within the terminal, which, in turn, is based on the experience of comparable developments elsewhere in the State. For industrial and residential sites and services, the FIRR calculations have also been based on sales revenues estimated relative to comparable developments elsewhere in the State. The results of the analyses show the following:

<u>Town</u>	<u>Component</u>	<u>FIRR (percent)</u>
Mysore	Water Supply	15.5
	Truck Terminal	14.1
Channapatna and Ramanagaram	Water Supply	7.6
Ramanagaram	Cultural-cum-Commercial and Training Center	2.6
Tumkur/Ramanagaram	Industrial Sites and Services	16.0
Tumkur/Channapatna/ Ramanagaram	Residential Sites and Services	14.8

84. Financial projections show the forecast receipts and expenditures of each of the four ULGs, which will be affected by the Project over the period from FY1995 to FY2005. On the expenditure side, these projections include the effects of servicing those parts of the proposed loan for which ULGs will be responsible while revenues are based on current sources or already approved increases in taxes and charges. The projections reveal a cash flow deficiency that each ULG will need to generate in each year to achieve a break-even situation. The State through its State Finance Commission is currently examining the weak financial position of ULGs, with a view to improving their revenue base through more efficient revenue collection and a better tax sharing arrangement between the ULGs and the State. In addition, it is envisaged that the

proposed resource mobilization TA will assist each ULG in developing a comprehensive revenue generation program over time, not only to meet any financial deficiency but also to generate sufficient funds to meet at least part of its future development expenditures. These projections are presented in Appendix 12.

## 2. Economic Analysis

85. Economic analysis of Project subcomponents has been carried out in line with the Bank's *Framework for the Economic and Financial Analysis of Urban Development Sector Projects*, with due account being taken of both ability to pay and willingness-to-pay. In view of the large number of very small individual subcomponents, economic analysis has concentrated on the larger subcomponents costing over \$500,000, particularly those which are nonrevenue generating or which have large nonrevenue-generating components. The subcomponents for which economic analysis has been undertaken are those covering the improvement of water supply in Mysore and in Ramanagaram and Channapatna, and the improvement and construction of urban roads in Mysore and in Tumkur.

86. In the case of the water supply and sewerage subcomponents, the economic analysis was based on the economic value of water, which reflects the real resource costs of supplying water, including its value in alternative uses, and the consumers' willingness to pay for improved water supply as identified in the socioeconomic survey. The results of the economic analysis show that the water supply subcomponent has an EIRR of 13.6 percent in Mysore and 10.3 percent in Ramanagaram and Channapatna. Both subcomponents are largely targeted at low-income beneficiaries and will generate significant, intangible social benefits as well as sizable nonquantifiable health and environmental benefits.

87. All of the urban road components of the Project show an acceptable EIRR. In the case of the intermediate ring road and the municipal road rehabilitation and upgrading in Mysore, the benefits stream is expressed in terms of vehicle operating cost saving to traffic that is expected to use the road in the future. The EIRR is 21.5 percent for the intermediate ring road and ranges from 35.5 percent to 73.6 percent for the road rehabilitation and upgrading components.

88. The outer ring road in Mysore and the southern bypass in Tumkur are being proposed to open up areas for development that are away from the traditional centers of the towns thereby relieving the current congestion in the town centers. The benefits from both roads have therefore been assessed in terms of the expected increase in value of land adjacent to the road. With conservative assumptions regarding the likely increase in land values and the area of land that will be affected by the road, both roads show high internal rates of return, with the Mysore outer ring road having an EIRR of 53.1 percent and the Tumkur southern bypass having an EIRR of 32.9 percent.

89. Sensitivity tests have been carried out on these economic analyses. The EIRRs of all the road components are very robust with respect to changes in the major parameters. The EIRR of the Mysore and the Channapatna and Ramanagaram water supply components are also relatively robust. Further details of the economic and financial analyses are in Appendix 13.

### **3. Affordability Analysis**

90. The affordability to beneficiaries of the Project has been assessed in terms of general criteria relating to the proportion of income the beneficiaries are willing to spend on specific urban services and on income distribution data derived from the socioeconomic survey in the four Project towns. To provide for satisfactory levels of service by the existing system as well as by the Project, water tariffs will need to be increased by about 250 percent over the next 10 years. While the required tariff increases are significant, the tariffs proposed are estimated to be affordable to the majority of the population based on the criterion that such charges should not exceed 5 percent of income. A household at the upper limit of the LIG (Rs2,650 per month (\$88)) will pay approximately 2.7 percent of this income for water and sanitation upon the full implementation of the tariff increases. Even households earning only Rs1,250 (\$40) per month should find the tariffs affordable as they will pay about 4.7 percent of this income for water and sanitation. While the most disadvantaged households may find the tariffs difficult to afford, it is envisaged that these households will be served by a network of public stand posts for which a small charge will be made to defray a part of the expenses and help in water conservation.

91. The residential sites and services subcomponents together with provision for housing have been assessed as affordable because the prices of plots to be sold to LIG households are cross-subsidized from the prices charged to middle-income households. It is envisaged that the subcomponent will be affordable to LIG households as estimated repayments for the house and lot will be in the order of about 30 percent of average household income for low-income households, which is substantially below the average expenditure on housing by LIG households.

### **4. Subsidies**

#### **a. Water Supply and Sanitation**

92. For the water supply components in Mysore and in Channapatna and Ramanagaram, the average incremental financial and economic costs have been calculated in order to provide a basis for estimating the extent of subsidies associated with the project.

93. In Mysore, the average incremental financial cost and the average incremental economic cost both exceed the tariff for water supply in the initial years of the Project. However, the tariff for water supply is projected to increase substantially in real terms over the life of the project. Accordingly while in the initial years of the project there will be both small financial and economic subsidies to consumers, the tariff per cubic meter of water is projected to increase to the levels of both the AIFC and AIEC in year 2000 at which point there will be no more subsidies associated with this component.

94. For Channapatna and Ramanagaram water supply component, the proposed tariff for water supply will rise substantially over the life of the Project. However, it will remain below both AIFC and AIEC throughout the Project's life. There will therefore be both economic and financial subsidies throughout the life of the project. These subsidies will benefit all users of the improved water system and can be justified on the grounds of affordability, given that 85 percent of the beneficiaries in these towns are poor and that the secondary objective of the project is poverty reduction, and on the grounds of the externalities which result from improved water supply.

95. Under the tariff structure that has been assumed for the purpose of financial and economic analysis and in the absence of metering of supplies, any subsidies will be enjoyed by all categories of beneficiaries. However, in the event that metering of water supplies is introduced in the future and a stepped tariff introduced which links price with consumption, it will be possible to direct subsidies more towards the lower income groups with low levels of water consumption and away from the more affluent consumers or commercial or industrial users.<sup>1</sup>

96. Financing of the above subsidies will need to be addressed by the appropriate urban local governments through revenue from property taxes and other sources. Methods to improve the revenues of the ULGs will be studied in the proposed technical assistance for resource mobilization.

#### **b. Low-Income Housing**

97. The low income housing component will also contain an element of subsidy although this will all be internalized within the component. In order to enable 50 percent of the component to be made available to low income households at the NHB interest rates, the interest charged on the remaining 50 percent that will be lent to middle income households will be very much higher at market rates. Middle income borrowers will therefore be providing a cross-subsidy to the low income groups. There will however be no financial or economic subsidy outside of the component.

### **5. Project Risks**

98. Given that this is the first Project in the urban development sector in India and taking into account the experience of the World Bank in the sector and the Bank's own experiences in other sectors in India, there are a number of potential risks associated with the Project. The risks relate to (i) Project implementation arrangements, (ii) land acquisition problems, (iii) financial constraints of ULGs, (iv) delays in various levels of Government approvals and clearances for Project activities, and (v) capacity constraints of ULGs. In the Project design and in the assurances obtained from the State, all the foregoing risks have been taken into account and corrective measures as appropriate put in place. The measures include (i) careful and workable design of Project implementation arrangements, supported by local and international consultants' input, (ii) in consultation with the agencies concerned, drawing up a comprehensive time-bound land acquisition program and covenanting the same; (iii) obtaining assurances from the State that adequate budgetary provisions will be made to cover local currency costs in a timely manner and providing support to the State, through the Project as well as through the advisory TA to improve the ULG financial resource base; (iv) agreement with the State on the establishment of an Empowered Committee with full authority to make decisions on all aspects of project implementation and providing the necessary approvals and clearances as required; and (v) providing funds in the Project, as well as through consulting support, to prepare and operationalize a comprehensive training program for sector personnel to improve their technical and managerial skills. All the foregoing measures will ensure that the potential Project risks are minimized.

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<sup>1</sup> Metering of water supply for small towns is not envisaged in the foreseeable future because of cost considerations.

## **C. Environment**

99. Environment-related benefits are likely to be substantial. Sanitation improvements will mean reduced contamination of surface water, efficient sullage disposal, and a lower incidence of groundwater pollution with consequent improvements in public health. Improved drainage will considerably reduce internal flooding and will also contribute to an improvement in public health. Road improvements will ease traffic congestion, reduce road accidents, abate noise, and reduce dust from roads currently unpaved.

100. Civil works and equipment costs for Project components that will benefit the environment directly, namely the water supply, solid waste management, sewerage, storm water drainage, and low-income sanitation components, account for \$35.6 million, which is the equivalent of 43 percent of the base cost of the Project.

## **D. Social Dimensions**

### **1. Poverty Reduction**

101. The socioeconomic survey of the Project towns revealed that over 70 percent of potential beneficiary households of the Project had monthly incomes of less than Rs2,650 (\$88) and were classified as LIG. The Project is therefore being implemented mainly in areas where poverty is widespread. The Project will substantially improve the urban infrastructure in these areas by providing better water supply, sewerage, solid waste management, storm water drainage, and urban transport. It will substantially improve the living conditions and reduce public health hazards in the Project areas. Better health can lead to greater capacity for employment, education, and income generation. Poverty often stems from poor health which prevents residents from engaging in productive activity and thereby earning income. Good water supply, sanitation, drainage, solid waste disposal, and housing will therefore help directly reduce poverty in the Project areas.

### **2. Impact on Women**

102. Women will be one of the principal beneficiary groups of the Project. Improvements in water supply will directly benefit women who are primarily responsible within the household for the collection of water. Time and energy necessary for this task will be reduced. Women will also benefit from the provision of improved sanitation facilities, particularly public and individual latrines, as at present they often walk long distances or wait until dark to defecate in nearby open areas. Improved solid waste disposal will help women discharge the task of managing household waste while improved storm water drainage will reduce the work that women need to put into cleaning up and repairing damage caused by flooding. In addition, improved community health will reduce the time women spend caring for the sick in the family, particularly children. Improvements in living conditions will also mean an improvement in the environment in which women undertake home-based income-generating activities. Further, the cultural-cum-commercial and training center at Ramanagaram and the women's training center at Tumkur will provide facilities for poor women, particularly distressed women with no means of support, to develop their skills and obtain gainful employment.

## VI. ASSURANCES

103. The Government and Executing Agencies have given the following assurances, in addition to the standard assurances, which have been incorporated in the legal documents:

- (i) KUWSDB will take all necessary steps within six months from loan effectivity to increase water tariffs and sewerage charges in accordance with the notification issued by the State to ensure that in each Project town, the full cost recovery for O&M of water supply and sanitation services is achieved.
- (ii) The State will implement the agreed upon recommendations of the Bank-financed advisory TA on resource mobilization within six months of its finalization.
- (iii) Within nine months of loan effectivity, the State will prepare and submit to the Bank for approval a comprehensive training program for the training of sector personnel in accordance with the recommendations of the Project management consultants.
- (iv) The State will implement, in accordance with the agreed upon timetable, the institutional, financial and operational action plan.
- (v) All land required for the Project will be acquired in accordance with the time-bound land acquisition program agreed upon with the State so as to avoid any undue delay in Project implementation.

## VII. RECOMMENDATION

104. I am satisfied that the proposed loans would comply with the Articles of Agreement of the Bank and recommend that the Board approve (i) the loan of \$85 million to India and (ii) the loan of \$20 million to the Housing Development Finance Corporation Limited for the Karnataka Urban Infrastructure Development Project from the Bank's ordinary capital resources, each with interest to be determined in accordance with the Bank's pool-based variable lending rate system for US dollar loans and with an amortization of 25 years, including a grace period of 5 years, and such other terms and conditions as are substantially in accordance with those set forth in the draft Loan Agreements, Guarantee Agreement and Project Agreement presented to the Board.

MITSUO SATO  
President

20 November 1995



## APPENDIXES

<b>Number</b>	<b>Title</b>	<b>Page</b>	<b>Cited On (page, para.)</b>
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## SUPPLEMENTARY APPENDIXES

(available on request)

A	Description of Project Components
B	Staffing and Cost Estimates for PMU and PIU
C	Cost Estimates for Consulting Services
D	Scope of Midterm Review
E	Benefit Monitoring and Evaluation Activities
F	Summary Initial Environmental Examination
G	FIRR and EIRR Calculations
H	Summary Initial Social Assessment

## RECENT EXTERNAL ASSISTANCE TO THE URBAN SECTOR

Project	Year Approved	Source	Terms	Amount (\$ million)
<b>1. Investment Projects – Loan Financed</b>				
<b>a. India</b>				
Housing Development Finance Corporation	1989	Germany	Loan	13.37
Urban City Water Supply Project	1992	Japan	Loan	50.19
Financial Institutions Reform and Expansion Program (FIRE) – Urban Infrastructure Development <sup>1</sup>	1994	USAID <sup>2</sup>	Loan	125.00
<b>2. Investment Projects – Grant Financed</b>				
Vizakapatnam Habitat Improvement Project	1988	United Kingdom	Grant	16.07
Hyderabad Habitat Improvement Project	1989	United Kingdom	Grant	24.59
Urban Basic Services	1990	United Nations	Grant	19.00
Calcutta Habitat Improvement Project	1990	UNICEF <sup>3</sup>	Grant	22.18
Indore Habitat Improvement Project	1990	United Kingdom	Grant	25.31
Vijaywada Habitat Improvement Project	1990	United Kingdom	Grant	29.34
<b>3. Technical Assistance – Grant Financed</b>				
<b>a. India</b>				
Uttar Pradesh Water Supply VI Community Participation (CPC)	1989	Netherlands	Grant	0.46
Environmental/Sanitary Kanpur/Mirzapur Phase II	1989	Netherlands	Grant	4.60
Andhra Pradesh Sanitation	1989	Netherlands	Grant	1.74
Informal Sector in an Urban Economy	1990	Canada	Grant	0.02
Housing Finance Development Fund and Miscellaneous Activities	1991	Netherlands	Grant	1.02
Housing Finance System Expansion Program	1992	United States	Grant	4.30
Community Water Supply	1992	WHO <sup>4</sup>	Grant	0.22
<b>b. Karnataka</b>				
Design of Training Packages for Low Cost Housing, Urban Development and Finance for State Municipal Officials	1985	Netherlands	Grant	6.50
Solid Waste Management Project in Bangalore	1992	Netherlands	Grant	0.10
Urban Poverty Alleviation Project in Bangalore	1993	Netherlands	Grant	1.00

<sup>1</sup> USAID's budget for commercially viable urban infrastructure development in India for the period FY1994–FY1999.

<sup>2</sup> United States Agency for International Development

<sup>3</sup> United Nations International Children's Emergency Fund

<sup>4</sup> World Health Organization

## INSTITUTIONAL, FINANCIAL, AND OPERATIONAL ACTION PLAN

	Objective/Task	Action	Completion Date
<b>A.</b>	<b>Institutional</b>		
1.	Ensure that the ULGs exercise their delegated authority to improve their operational efficiency, with regards to imposition of financial charges and discontinuation of urban services to defaulters.	DHUD/ULGs	31 Mar 1996
2.	Address the overall shortage of skilled personnel in the ULGs and develop a comprehensive training program with the assistance of consultants provided under the Project.	DHUD/ULGs	30 Sep 1996
3.	Strengthen the TCCC which plays a vital role in guiding and coordinating Project implementation through expanding TCCC to include the elected mayor or chairman; also in the smaller towns (Channapatna and Ramanagaram), a TCCC must be appointed to guide their development.	DHUD/ULGs	30 Jun 1996
4.	Develop a mechanism to encourage increased involvement of the private sector, NGOs, and CBOs in urban development efforts.	KUIDFC/ULGs/ Consultants	30 Jun 1996
<b>B.</b>	<b>Financial</b>		
5.	Strengthen resource mobilization to adequately fund the provision of efficient urban services through a combination of new charges, rationalization of existing charges, and improvements in collection efficiencies. Specifically undertake the following tasks:		
(i)	Improve collection efficiencies of water supply charges and property tax to no more than 90 days arrears.	KUWSDB/ULGs	progressively achieve 90 days arrears by 1 April 1997.
(ii)	Streamline property tax appeals procedure.	DHUD/FD	31 Mar 1996
(iii)	Establish a more aggressive policy in dealing with defaulters of water tariffs and property tax payments.	DHUD/FD/ Consultants	31 Mar 1996
(iv)	Introduce user charges for solid waste management in selected municipalities.	DHUD/ULGs/ ULGs	31 Mar 1996

(v)	Increase the involvement of the private sector on a more organized basis in solid waste management operations.	DHUD/ULGs/ ULGs	30 Jun 1996
(vi)	Regularize illegal construction within the ULG boundary so as to include such residents in the tax net.	DHUD/ULGs	30 Jun 1996
(vii)	Extend ULG boundary in Project towns to include households on the periphery of the Boundary, which currently receive urban services but are not included in the tax net.	DHUG/ULGs	31 Mar 96
6.	After due consultation with the Bank, implement the recommendations of the Bank-financed Advisory TA on Resource Mobilization.	DHUD/FD/ULGs	30 Sep 1996
<b>C. Operational</b>			
7.	Appoint other essential PMU staff.	DHUD	31 Dec 1995
8.	Establish PIUs in Mysore, Tumkur, and Ramanagaram and appoint appropriate staff.	DHUD	Within 2 months of loan effectivity
9.	Appoint Project management and design and supervision consultants.	DHUD	31 Mar 1996
10.	Set up Project accounting system.	KUIDFC	31 Mar 1996
11.	Provide adequate funds in the budget for Project execution.	DHUD/FD	31 Mar 1996
12.	Acquire all land required for the Project in accordance with the land acquisition program (see Table 2 of Appendix 10).	DHUD/ULGs	30 Jun 1996
13.	Draw up a detailed resettlement plan and forward to the Bank for review and approval.	DHUD/ULGs	30 Jun 1996

**Notes:**

CBO	-	Community Based Organization
Consultants	-	Project Management Consultants
DHUD	-	Department of Housing and Urban Development of the Government of Karnataka
FD	-	Finance Department of the Government of Karnataka
KUIDFC	-	Karnataka Urban Infrastructure Development and Finance Corporation
KUWSDB	-	Karnataka Urban Water Supply and Drainage Board
NGO	-	Nongovernment Organization
PIU	-	Project Implementation Unit
PMU	-	Project Management Unit
TCCC	-	Town Council Coordination Committee
ULGs	-	Local Governments of Mysore, Tumkur, Ramanagaram and Channarayana

## PROFILE OF PROJECT TOWNS

Town	Location	Administrative Status	Population (1991)	Employment (1991)	Labor Force Participation Rate (1991) %	Income per Capita (in 1981 prices) Rs	Main Industries
Mysore	140 km southwest of Bangalore	District Headquarters	Male	Male	Male	1991	Tires and Tubes, Heavy Equipment, Silk, Textiles, Light Engineering
			Female	Female	Female	1981	
			Total	Total	Total	Growth (1981-1991)	
			Growth (1981-1991)	Growth (1981-1991)	Growth (1981-1991)	Growth (1981-1991)	
Tumkur	70 km north of Bangalore on Bangalore-Bombay National Highway	District Headquarters	Male	Male	Male	1991	Watches, Computer Peripherals, General Engineering, Food and Beverages
			Female	Female	Female	1981	
			Total	Total	Total	Growth (1981-1991)	
			Growth (1981-1991)	Growth (1981-1991)	Growth (1981-1991)	Growth (1981-1991)	
Channapatna	60 km southwest of Bangalore, on Bangalore-Mysore State Highway	Subdistrict Headquarters	Male	Male	Male	1991	Wooden Handicrafts and Toys, Silk, Textiles, Beedi Making, Incense Stick Making
			Female	Female	Female	1981	
			Total	Total	Total	Growth (1981-1991)	
			Growth (1981-1991)	Growth (1981-1991)	Growth (1981-1991)	Growth (1981-1991)	
Ramanagaram	47 km southwest of Bangalore, on Bangalore-Mysore State Highway	Subdistrict Headquarters	Male	Male	Male	1991	Silk, Textiles, Beedi Making, Incense Stick Making
			Female	Female	Female	1981	
			Total	Total	Total	Growth (1981-1991)	
			Growth (1981-1991)	Growth (1981-1991)	Growth (1981-1991)	Growth (1981-1991)	

Source: Census of India, 1991.

Notes: (i) Data refer to census districts

(ii) Labor Force Participation Rate =  $\frac{\text{Total workers}}{\text{Total population}}$

## **LOW-INCOME HOUSING COMPONENT**

### **A. Housing in Karnataka**

1. The population of Karnataka State, which was 44.8 million in 1991, is 48 million now (1995) and is expected to reach 56 million by 2001. The urban population was 33 percent of the total population in 1991. It is projected to increase to 23 million, i.e., 41 percent of the total population by 2001. The rise in population, particularly in urban areas, is due to unabated continuous migration of people from rural areas to cities and towns in search of livelihood. Because of this, the problem of housing has assumed serious proportions. The 1991 data shows that on a stock of about 7.73 million housing units, there existed a shortage of about 1.05 million units and further 1.5 million units required upgrading. Thus the shortage in 1991 was for 2.55 million housing units. This shortage is projected to increase to 2.8 million by 2001 if urgent measures are not taken to bridge the gap. The slum population is increasing at an alarming pace and in Bangalore alone there exists a shortage of 60,000 units for 300,000 slum dwellers. This situation has emerged in urban areas mainly because of the problem of low level of income and high unemployment. Affordability among the urban low-income population is a major deterrent to the acquisition of housing from the open market. Therefore illegal occupation of public and private land and living in slums and shanties have been the cheapest solution available to the low-income groups (LIGs) in Karnataka. Under the Project, a sum of \$20 million has been allocated for providing housing finance mainly to the low-income population in the Project area as well as in other selected areas within the Bangalore subregion to promote home ownership among them.

2. The Housing Development Finance Corporation (HDFC), the Executing Agency for this component, will associate itself with nongovernment organizations (NGOs), community based organizations (CBOs) that are working for the low-income population, to facilitate the process of identifying the beneficiaries belonging to LIGs mainly in the Project towns, and providing them housing finance for home ownership.

### **B. Modalities Proposed**

3. After the loan becomes effective, the Bank will disburse \$20 million to HDFC in about three tranches. The terms of the loan to HDFC will be the same as for the Government of India, i.e. for a period of 25 years, including a grace period of five years, at the Bank's variable interest rate for dollar loans.

4. HDFC will identify the beneficiaries in consultation with Department of Housing and Urban Development (DHUD) and then lend the proceeds of the loan as follows:

- (i) at least 50 percent to LIGs at interest rate applicable to LIG group from the National Housing Bank (NHB);<sup>1</sup> and
- (ii) the balance to other categories as deemed appropriate by HDFC at market interest rates, which are currently around 18-20 percent per annum.

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<sup>1</sup> The current interest rate for LIGs from NHB is 12.5 percent for loans of less than Rs25,000 and 15 percent for loans in excess of Rs25,000 but less than Rs100,000.

### **C. Responsibilities of Organizations Participating in the Program**

5. The Government of Karnataka, HDFC, and NGOs/CBOs will be the principal organizations participating in the program at the field level. Their responsibilities will be as follows:

#### **1. Government of Karnataka**

- (i) Act as a facilitator.
- (ii) Identify and allocate land to LIGs.
- (iii) Ensure that requisite permissions are granted without delay.

#### **2. Housing Development Finance Corporation**

- (i) Establish linkages with NGOs/CBOs to facilitate the process of identifying beneficiaries belonging to LIGs.
- (ii) Channelize funds to LIGs, directly or through intermediaries.
- (iii) Establish selection criteria for identification of NGOs/CBOs and beneficiaries. The criteria will include their capacity to pay back the loan, and proof that they do not own any other housing unit.
- (iv) Recovery of monthly installments from beneficiaries with the assistance of NGOs/CBOs.
- (v) Monitoring the progress and quality of construction.

#### **3. NGOs/CBOs**

- (i) Act as intermediaries between the Government, HDFC, and the community.
- (ii) Identify beneficiaries belonging to LIGs.
- (iii) Determine housing and financial needs of the community and prepare designs and layouts for development with the consensus of the community to cater to their social and cultural needs.
- (iv) Assist the beneficiaries in the administrative procedures involved in registration of their group, and in obtaining permissions from various authorities for development of land.
- (v) Assist the beneficiaries in assessing their financial needs.
- (vi) Inculcate the culture of savings within the community by forming thrift and credit groups to meet their loan repayments and other emergency, health and economic needs.
- (vii) Monitor the progress and quality of construction.
- (viii) Assist HDFC in recovering monthly installments from the beneficiaries.

### **D. Beneficiaries of the Program**

6. Under the Project itself, 4,120 residential sites and services plots have been earmarked for the LIG category. Part of the loan proceeds for housing will be used for financing beneficiaries to construct houses on these plots. Building centers will be set up in the Project area to facilitate the use of new low-cost technologies with the help of locally available materials, production of materials required for construction, and providing skills to the local population to participate in the construction of their houses.

7. Also, some industrial sites and services plots under the program will be reserved for production of building materials like blocks, roof tiles, windows, doors, etc. The beneficiaries of the residential sites and services plots can purchase materials from these production centers at reasonable prices and avoid incurring huge transportation costs.
8. The average cost of a 37 sq m house for the LIGs will be about Rs63,000 (\$2,006), of which the loan component will be Rs57,000 (\$1,815) and the beneficiary's own contribution, either in kind (labor) or cash will be Rs6,000 (\$191). The monthly installment of the LIG beneficiary towards loan repayment will be Rs716 (\$22) that will be 26 percent of his monthly income and is well within the limits affordable to the LIG beneficiaries.
9. By adopting the above model, at least 50 percent of the funding available for housing under the Bank program will be utilized toward providing financial assistance to LIGs at affordable rates and no subsidy needs to be provided by either the Central or State Government. The Government of Karnataka will be encouraging home ownership among more than 5,000 families belonging to LIGs within the State.



**COST ESTIMATES**  
**(\$ million)**

**Total Base Costs by Component**

Component <sup>a</sup>		Foreign	Local	Total
<b>A. Base Cost</b>				
1.	Land Acquisition	0.00	7.67	7.67
2.	Civil Works			
	Water Supply	2.79	9.38	12.17
	Sewerage	3.58	10.69	14.27
	Solid Waste Management	0.00	0.08	0.08
	Storm Water Drainage	0.32	0.96	1.28
	Road Improvement	2.96	6.98	9.94
	Truck and Bus Terminals	0.36	1.09	1.45
	Slum Upgrading	0.10	0.31	0.41
	Low-income Sanitation	0.35	0.97	1.32
	Residential Sites and Services	2.52	8.86	11.38
	Industrial Sites and Services	0.85	3.27	4.12
	Cultural-cum-Commercial Center	0.09	0.27	0.36
	Women's Training Center	0.00	0.10	0.10
	Subtotal	13.92	42.96	56.88
3.	Equipment			
	Water Supply	0.70	2.10	2.80
	Sewerage	0.88	2.68	3.56
	Solid Waste Management	0.26	0.84	1.10
	Low-income Sanitation	0.00	0.07	0.07
	Subtotal	1.84	5.69	7.53
4.	Administration and Incremental O&M Costs			
	Administration (Project Management Unit and Project Implementation Unit)	0.00	1.12	1.12
	Incremental O&M Costs	0.27	0.66	0.93
	Subtotal	0.27	1.78	2.05
5.	Institutional Support			
	Bangalore Subregional Plan	0.41	0.64	1.05
	Others	0.25	0.15	0.40
	Subtotal	0.66	0.79	1.45
6.	Consulting Services	1.70	3.00	4.70
<b>Total Base Costs</b>		<b>18.39</b>	<b>61.89</b>	<b>80.28</b>

<sup>a</sup> Excluding Low-income Housing Component

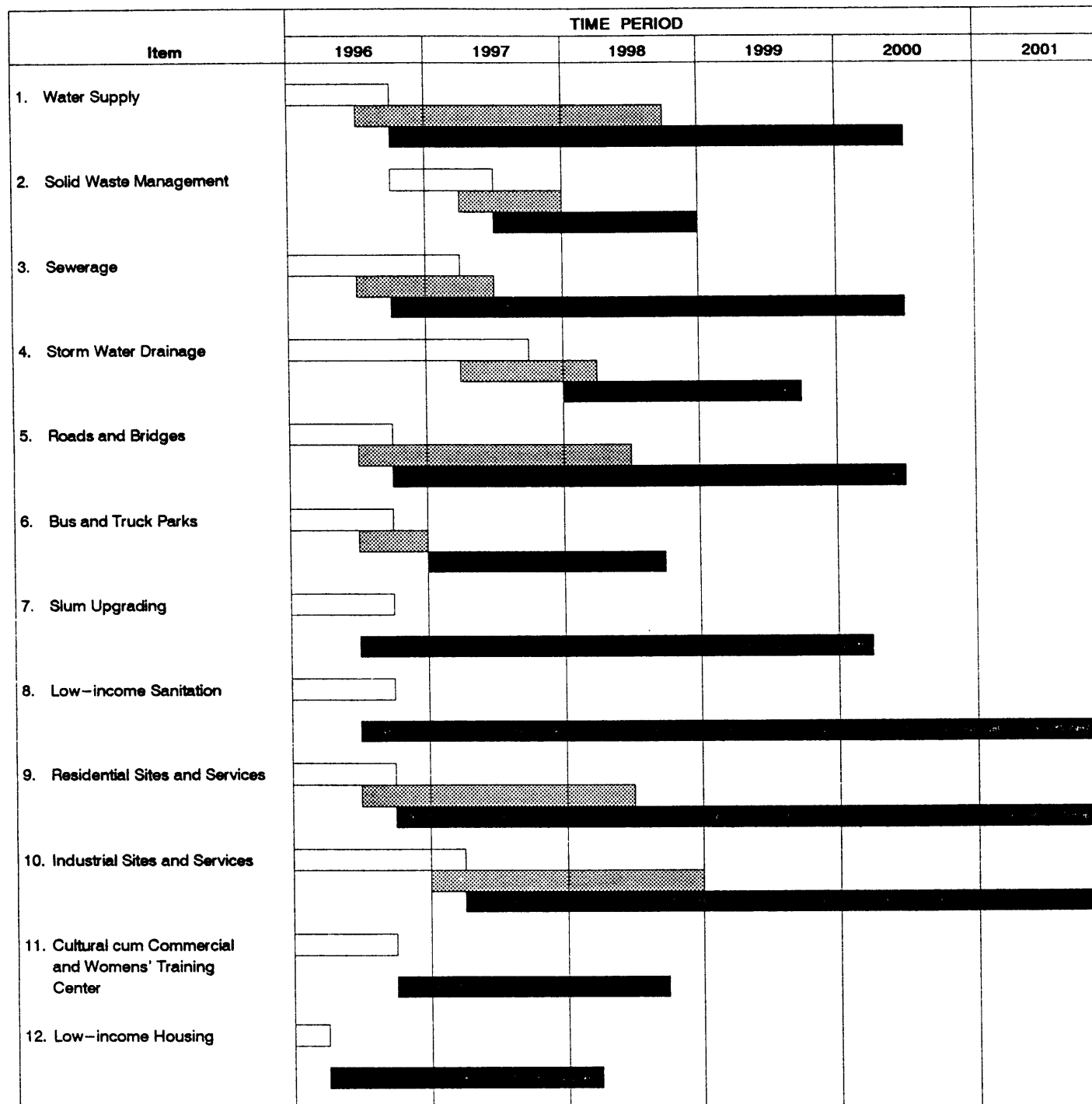
## HOUSING DEVELOPMENT FINANCE CORPORATION LIMITED FINANCIAL BACKGROUND




1. The Housing Development Finance Corporation Limited (HDFC) was established in 1977 as a privately owned financial institution specializing in the provision of housing finance to individuals, cooperative societies, and the corporate sector. HDFC's primary corporate objective is to enhance the residential stock available to all Indians through the provision of housing finance. It has sought to achieve this objective through the integration of the housing finance sector with domestic and foreign capital markets.
2. HDFC is a publicly listed company on the Bombay Stock Exchange. Its shares are widely distributed among 160,000 shareholders with individuals owning 32 percent of total equity. The remaining shares are held by corporations, mutual funds, insurance companies, and foreign institutional investors.
3. HDFC is currently the largest originator of housing loans in the private sector in India. As shown in Table 1, loan approvals in FY1993/94 were Rs10,247.7 million (\$331 million). HDFC has funded its lending program through share issues, customer deposits as well as borrowings in both domestic and international markets. In the past, HDFC has raised funds from loans provided by the World Bank (IBRD), the Commonwealth Development Corporation (CDC), the Kreditanstalt fur Wiederaufbau, and from capital markets in the USA under the Housing Guaranty Program of the United States Agency for International Development (USAID).

**Table 1: Housing Development Finance Corporation Limited (HDFC)  
Summary Financial Information  
(Rs million)**

	Fiscal Year Ending 31 March				
	1989/90	1990/91	1991/92	1992/93	1993/94
<b>Operating Summary</b>					
Loan Approvals	6,030.3	8,137.8	7,118.6	8,591.4	10,247.7
Loan Disbursements	4,892.6	6,685.0	6,227.8	7,198.9	8,890.7
<b>Financial Summary</b>					
Gross Income	1,943.5	2,633.9	3,722.6	4,735.0	6,081.5
Net Income	247.2	298.1	457.8	555.5	1,053.6
Dividend (%)	20%	22%	24%	25%	28%
Equity	849.7	1,533.6	1,879.8	3,255.8	5,002.8
Long-term Debt	12,217.8	17,269.4	21,298.6	25,617.1	30,711.9
Deposits	5,289.3	6,031.9	8,713.0	10,293.2	14,581.8
Debt/Equity Ratio	14.4	11.3	11.3	7.9	6.1

## IMPLEMENTATION SCHEDULE



-  Preparatory Activities
-  Land Acquisition
-  Physical Works

## TENTATIVE CONTRACT PACKAGE SCHEDULE

Package No.	Brief Description	Estimated Contract Value (\$ million)	Mode of Procurement
<b>Water Supply – Mysore</b>			
1.	Pump Houses, Ground – Level Service Reservoirs (GSLRs), etc.	1.57	LCB
2.	Pumping Mains	3.81	LCB
3.	Treatment Plant (TP), Sump at TP Site	0.97	LCB
4.	Pumping Equipment	1.20	LCB
<b>Water Supply – Tumkur</b>			
5.	Distribution Mains and Improvements to Existing TP	0.39	LCB
6.	Water Supply – Channapatna and Ramanagaram Pump Houses, GSLR, Overhead Tanks, Cross Drainage Works, etc.	0.92	LCB
7.	Pumping Mains	2.95	LCB
8.	Treatment Plant	0.45	LCB
9.	Pumping Equipment	0.57	LCB
10.	Distribution Mains, Distribution Systems	1.15	LCB
<b>Sewerage – Mysore</b>			
11.	Sewer Lines, Submains and Canal Crossings	5.08	LCB
12.	Treatment Plant (TP) for A and D Districts and Captive Power at TP Site	2.14	LCB
13.	TP for B District and Captive Power at TP Site	3.01	LCB
14.	TP for C District and Captive Power at TP Site	0.98	LCB
<b>Sewerage – Tumkur</b>			
15.	Sewer Lines, Submains, and Railway Crossing	4.66	LCB
16.	Treatment Plant, Captive Power at TP Site, etc.	0.56	LCB
<b>Sewerage – Ramanagaram</b>			
17.	Sewers, Wet Wells, Pump House, Pumping Equipment, Treatment Plant, Captive Power at TP Site, etc.	1.39	LCB
<b>Storm Water Drainage</b>			
18.	Primary and Secondary Drains in Mysore	0.80	LCB
19.	Primary and Secondary Drains in Tumkur	0.27	LCB
20.	Primary and Secondary Drains in Ramanagaram	0.10	LCB
21.	Primary and Secondary Drains in Channapatna	0.11	LCB
<b>Solid Waste Management – All Project Towns</b>			
22.	Garbage Bins (1,035 nos.)	0.03	LCB
23.	3T Trucks (9 nos.) and 1.5 T Trucks (21 nos.)	0.36	IS
24.	Tractors (47 nos.)	0.33	IS
25.	Trailers (74 nos.)	0.24	IS
26.	Hospital Incinerators (4 sets)	0.05	LCB
27.	Weigh Bridge	0.02	LCB
28.	Plant for Making Fuel Pellets from Garbage	0.06	LCB
29.	Compost Plants (3 nos.)	0.10	LCB

<b>Package No.</b>	<b>Brief Description</b>	<b>Estimated Contract Value (\$ million)</b>	<b>Mode of Procurement</b>
<b>Slum Upgrading</b>			
30.	15 Slums in Mysore	0.17	LCB
31.	6 Slums in Tumkur	0.07	LCB
32.	7 Slums in Ramanagaram	0.16	LCB
33.	3 Slums in Channapatna	0.01	LCB
<b>Residential Sites and Services</b>			
34.	4,078 Sites in Mysore	5.90	LCB
35.	1,609 Sites in Tumkur	2.82	LCB
36.	750 Sites in Ramanagaram	1.33	LCB
37.	750 Sites in Channapatna	1.33	LCB
<b>Industrial Sites and Services</b>			
38.	80 ha in Tumkur	3.66	LCB
39.	10 ha in Ramanagaram	0.46	LCB
<b>Truck/Bus Terminals</b>			
40.	Truck Terminal in Mysore	0.88	LCB
41.	Truck Terminal in Tumkur	0.35	LCB
42.	Bus Terminal in Ramanagaram	0.22	LCB
<b>Others</b>			
43.	Cultural-cum-Commercial and Training Center in Ramanagaram	0.36	LCB
44.	Women's Training Center in Tumkur		

- Note: 1. The estimated contract values indicated are base costs.
2. The low-income sanitation component (total base cost \$1.39 million) for providing san latrines to 23,700 households is not included in this list as it will be implemented by urt local governments through nongovernment organizations and community based organizations with beneficiaries contribution in kind (labor).
3. LCB – Local Competitive Bidding
4. IS – International Shopping

## **TERMS OF REFERENCE FOR CONSULTING SERVICES**

### **A. Project Management Consultants**

#### **1. Objectives**

1. The main objectives of the consulting services are to (i) assist the Project Management Unit (PMU) in its functions and responsibilities of Project implementation, management, and monitoring; (ii) oversee the work of the design and construction supervision consultants; and (iii) to assist the Project Director (of the PMU) in giving approval to the designs and ensuring the quality of work. A suitable international consulting firm with association arrangements with a domestic consulting firm or an individual (computer expert) will be engaged for these services.

2. The Project management consultants will be based in the PMU office and will function as part of PMU. They are, however, expected to visit the construction works as often as required to efficiently carry out their responsibilities. The Team Leader of the Project management consultants will function as an overall Project Advisor to the Project Director. The other professional members of the team will provide advice, guidance, and training to PMU and Project Implementation Units (PIUs) as well as to the domestic consultants carrying out design and construction supervision.

#### **2. Tasks**

3. The tasks of the consultants will include the following:

- (i) Assist the Project Director in coordinating the work of PMU, PIUs, and the design and supervision consultants, as well as that of the various Implementing Agencies (IAs) to ensure smooth implementation of the Project;
- (ii) Assist PMU in developing annual Project work plans, staffing schedules, and budgets for PMU and PIUs;
- (iii) Oversee the work of the design and supervision consultants in carrying out additional field investigations and detailed engineering for various Project components. Also ensure that the designs prepared are appropriate and adequate;
- (iv) Assist PMU and PIUs with all aspects of procurement, including prequalification of contractors, preparation of technical specifications, tender document preparation, and bid evaluation;
- (v) Review the proposals of IAs/PIU heads regarding change orders and addendum to contracts and advise the Project Director accordingly. Also assist the Project Director with interpretations and applications of the various legal provisions of the

contract documents, in particular with respect to claims from contractors for time extension or extra payments, and in regard to the contractors' conformance and compliance with contractual obligations;

- (vi) Support PMU in all technical matters, such as preparing work orders for the design consultants; reviewing and approving surveys, studies and master plans, subproject final designs, and estimates; approving contractors' final works; ensuring sound supervision of subproject construction and any other technical matters arising;
- (vii) Provide guidance to the design consultants in the preparation of storm water drainage master plan and detailed bills of quantities for subprojects, and in carrying out pipe and leak detection studies, traffic management studies, and other studies as required;
- (viii) Assist PMU and PIUs in establishing, testing, and reviewing financial accounting and control systems and ensuring accurate and timely report submissions and funds flow from the Bank and onward to IAs, as required by the Government and the Bank;
- (ix) Draw the attention of the Project Director, in writing, to any deficiency in the quality of materials used and to any instances of nonconformance of the works with the prescribed technical specifications, approved drawings, and quality standards;
- (x) Investigate particular construction problems or delays that have been reported from the field and recommend action to overcome the problems and to avoid delays;
- (xi) Carry out periodic reviews of the construction work schedule and advise the Project Director on any delay in implementation and on corrective action to be taken;
- (xii) In collaboration with PMU, PIUs, and IAs, formulate plans for integration of NGO/CBO involvement into the Project for the sustainable implementation of the slum upgrading and low-income sanitation components and for maximizing low-income access to the housing and the land development programs;
- (xiii) Assist PMU and urban local governments (ULGs) in implementing resettlement plans for households that need to be relocated;
- (xiv) Assess the training needs of ULGs and the Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC) and prepare a suitable comprehensive training program for their staff. After approval of the training program by the State Government and the Bank, assist PMU in implementing the program; The consultant will consider a variety of training modalities including on-the-job

training, formal training, seminars and workshops, as well as any short-term training within regional institutions. Among other things, the training modules must cover the following subjects:

- (a) economic and social development planning
  - (b) physical and land-use planning
  - (c) land-use regulation and development control
  - (d) management of public infrastructure, services, and amenities
  - (e) public health, sanitation, and solid waste management
  - (f) financial management of municipal infrastructure, services, and facilities
  - (g) all aspects of financial and management accounting
  - (h) asset recording and management
  - (i) operation and maintenance of municipal infrastructure, services, and facilities
  - (j) resource mobilization and cost recovery
  - (k) harnessing the private sector, NGOs, and the community for urban development
- (xv) Review procedures for construction supervision, including quality, cost, and time controls and, if necessary, undertake modifications of related manuals;
  - (xvi) Assist PMU, PIUs, and the supervision consultants in construction supervision, particularly in quality control of the works. Also help resolve specific technical and other Project implementation-related issues at the local level;
  - (xvii) Assist PMU and PIUs in preparing and monitoring ULG management action plans and assist ULGs in fulfilling their requirements and determining requisite follow-up actions;
  - (xviii) Assist in the preparation of an overall benefit monitoring and evaluation system for the Project;
  - (xix) Prepare a computerization plan for the larger ULGs, covering their computer needs, application of the computers to be provided under the Project, and a program for the development of computer skills of ULG staff;
  - (xx) Assist ULGs in the institutional strengthening process and advise them on financial management and control;
  - (xxi) Prepare a Project Management Manual and an Urban Local Government Manual for the use and guidance of the Executing and Implementing Agencies. While the Project Management Manual will concentrate on the financial reporting and Management Information System aspects of the Project, the Urban Local Government Manual will concentrate on the institutional strengthening aspects of the Project; and



(xxii) Prepare the following reports for the Government and the Bank:

- (a) An inception report within two months of the commencement of services describing the adequacy of Project preparation by the Government including staff appointments, land acquisition, and community involvement. The inception report will further describe the detailed work program for the rest of the consulting services;
- (b) Monthly progress reports, starting from the end of month 3, reporting on progress made and highlighting the issues that are affecting the planned progress of the Project;
- (c) An interim report after approximately 21 months, presenting a broad view of the physical and institutional progress achieved and making recommendations on the modifications, if any, needed in implementing the Project;
- (d) A final report at the completion of the Project, giving a summary of the Project activities, problems met with during implementation, and the consultants' contributions in overcoming the problems.

## **B. Design and Construction Supervision Consultants**

### **1. Objectives**

4. The main objectives of the consulting services are to prepare detailed designs of the various Project components, prepare technical specifications and contract documents, assist in construction supervision of the works, and assist in carrying out the studies included in the Project.

5. Considering the volume and the geographical location of the works to be implemented, two packages for domestic consulting services are proposed, one for the Mysore works and the other for the works in Tumkur, Ramanagaram, and Channapatna. The design and construction supervision consultants will work under the overall guidance, technical control, and direction of the Project management consultants and will be responsible to the Project Director as well to the PIU head concerned.

### **2. Tasks**

6. The consultants' tasks will include the following:

- (i) Prepare a topographical base map (with contours at 5 m intervals) for each of the Project towns showing the topographical features in general and the details of existing storm water drains, local drains, and rivers as well as flooding areas. Using this map and the rainfall data for the town, prepare a storm water drainage

master plan for each of the Project towns, together with designs and cost estimates for each town;

- (ii) Develop a practical traffic management scheme comprising one-way systems, restricted access for large vehicles, junction and signal improvements, traffic islands, pedestrian crossings, deceleration lanes for turning traffic, suitable turning radii, separation of pedestrians and vehicular traffic, and segregation of slow and fast moving vehicles, as necessary, with estimate of cost for the scheme for each Project town;
- (iii) Develop alternative solid waste management scenarios, comprising various storage, collection, transportation, and disposal techniques and selecting the most appropriate solution in terms of technical, social, environmental, and financial viability, including cost recovery, and design a suitable system for each Project town. Also assist ULGs in setting up and operating the pilot plants for making fuel pellets/compost from solid wastes.
- (iv) For each Project town, conduct a detailed field survey to compile an inventory of the existing water supply and distribution system, including measurements of the existing supply capacity, the make and condition of the pipe, measurement of flows within the system components, and identification of the exact locations and the causes of water losses with the existing system. Based on the findings of the survey, recommend an effective working program for system repairs, pipe replacement, and control measures to reduce or eliminate identified water losses;
- (v) Carry out additional field investigations, including soil tests as necessary, and prepare the detailed design and construction drawings of each subproject;
- (vi) For all subprojects, prepare contract documents and technical specifications with approved contract drawings and final bills of quantities and any other information required by the tenderer to submit a bid;
- (vii) Assist the IAs/PIU heads in administration and management of the contracts including interpretation of the technical specifications and other contract documents as may be required;
- (viii) Check the line, level, and layout of the construction to ensure conformity with the contract;
- (ix) Assess the adequacy of all inputs such as materials and labor provided by the contractor and the construction methods proposed by the contractor, and ensure that they are satisfactory with particular reference to the technical requirements, Project implementation schedule, and environmental aspects, as well as the safety of the works, Project personnel, and the general public;

- (x) Provide effective and regular supervision of the works and ensure their quality and conformity with the standards and specifications prescribed in the contract;
- (xi) Compile and review all day-to-day quality control data obtained from the construction sites, and verify the accuracy of such data by random checks of the records and by carrying out independent testing where considered necessary;
- (xii) Certify to the quality of works accomplished and their conformity to specifications and drawings. If the consultants consider any item of work substandard or unacceptable, they will advise the PIU head concerned in writing about it, providing full justification thereof with all necessary supporting data, including test results;
- (xiii) Assist PIU heads/IAs in processing the claims from the contractor for time extension, extra compensation, expenses, or other similar matters;
- (xiv) Assist the PIU heads with the maintenance of Project accounts and preparation of financial statements;
- (xv) Prepare a simplified quality control manual for use of the field staff;
- (xvi) Prepare "as-built" final drawings of all completed subprojects;
- (xvii) Assist in preparing planned maintenance procedures for the ULGs infrastructure;
- (xviii) Propose and present for approval any changes in the plans that may be deemed necessary indicating any effect the changes may have on the contract and assist PIU heads/IAs in preparing the required change orders;
- (xix) Report periodically on the progress of works, the contractor's performance, quality of works, and the Project's financial status and projections;
- (xx) Submit the final report summarizing the construction activities indicating, among other things, contract changes, claims or disputes or any other substantive matters having an effect on the cost and progress of the work; and
- (xxi) Assist PMU in the preparation of the Project completion report.

## **C. Consulting Services for the Bangalore Subregional Plan**

### **1. Background**

7. Currently, there are many Government agencies at the state and municipal levels affected by the rapid growth experienced in Bangalore. There is a clear need and desire among the involved Government agencies to coordinate their plans, policies, and programs on a regional basis. This planning coordination will assist the State Government in maximizing the

economic and social benefits this growth can bring to the area. At the moment, there is no legal framework available in Karnataka to plan and coordinate the development of such a large region. However, there is an urgent need to integrate industrial development and investment plans into the policies of the physical planning agencies.

## **2. Objectives**

8. The objectives of the subregional plan are
  - (i) to recommend a development strategy and an appropriate land use and transport framework for the efficient development of the subregion;
  - (ii) to provide a vehicle for conserving valuable natural resources, sensitive environmental areas, ecological habitats, and good agricultural land in the subregion;
  - (iii) to introduce a mechanism for coordinating the plans and policies of different agencies in the subregion; and
  - (iv) to provide a development framework and conceptual plan for the subregion that sets out and obtains common agreement for spatial development objectives and the allocation of supporting infrastructure investment.

## **D. Scope of Work**

9. It is envisaged that the plan will be prepared over a period of 18 months. The work will be accomplished in four phases:

- |          |  |
|----------|--|
| Phase 1: | Data collection and preparation of base line studies                                   |
| Phase 2: | Preparation of development scenarios   |
| Phase 3: | Public consultations   |
| Phase 4: | Selection of the preferred development scenario and preparation of the conceptual plan |

10. The consultants' tasks will include
  - (i) preparing baseline surveys and reports on the subregion for transport, land use, environment, industrial economic development, urban/rural growth trends, natural resources, land development, and local governments;
  - (ii) drafting a review paper on the subregion, identifying key issues, constraints, and opportunities affecting future development;
  - (iii) preparing feasibility development scenarios outlining individual spatial and economic development patterns and specific costs;

- (iv) participating in consultations with the public, including NGOs/CBOs and LIGs;
- (v) incorporating public and private sector feedback into the recommended development strategy for the region;
- (vi) identifying cost recovery opportunities available from subregional planning;
- (vii) preparing action plans, including work programs, for each component of the plan;
- (viii) finalizing and publishing the conceptual subregional development plan;
- (ix) preparing a more comprehensive and detailed land use and transport framework for the Bangalore urban and rural districts and the Malur subdistrict of Kolar district, based as the conceptual plan for the subregion.
- (x) preparing a planning handbook to advise Government agencies on how to prepare a plan, what should be included and what are the relevant technical issues;
- (xi) providing on-the-job training in regional planning to local counterpart staff;
- (xii) organizing a study tour in the Asian and Pacific Region for State Government officials to learn about successes in developing similar subregional plans;
- (xiii) identifying the most appropriate approach to ensure that subregional planning is not a one-time effort but rather a methodical ongoing exercise; and
- (xiv) performing other tasks related to subregional planning as assigned by IA, namely, the Bangalore Metropolitan Region Development Authority.

## **LAND ACQUISITION AND RESETTLEMENT**

### **A. Land Acquisition**

1. A total of 711.42 ha of land is required for the Project as indicated in Table 1. The estimated acquisition and compensation costs for land and properties is \$7.67 million equivalent.
2. Acquisition of land and properties will be undertaken following the procedures established under the State's Land Acquisition Act with, wherever necessary, land being acquired on the basis of negotiated price to avoid delays in Project implementation. Negotiated prices instead of recorded transaction prices have been suggested because of the distortion in recorded transaction prices, resulting from underreporting of land prices to the authorities for tax and other reasons. Negotiated prices reflect what a buyer is willing to pay and the seller willing to accept, without the need for long, drawn-out legal processes.
3. Of the land required for the Project, almost 96 ha has been acquired by, or is already available to, implementing agencies. Acquisition proceedings are in progress for most of the remaining land to be acquired under the Project. The Appraisal Mission confirmed that notification for land acquisition, as required under the State Government procedures, has already been issued in respect of all land yet to be acquired. The Mission was informed by some urban local governments (ULGs) that they do not have the required deposit for such land acquisition. The Mission has agreed with the State Government that the required deposits will be provided to these ULGs as an advance, to be recovered by the State in due course. Details of the status of land acquisition and the proposed timetable for completion of land acquisition are also shown in Table 1.

### **B. Resettlement**

4. Based on preliminary designs it is estimated that about 160 households may need to be permanently relocated as a result of land acquisition under the Project. These households will be compensated through a combination of cash and alternative housing or site and services in the sites and services scheme nearest to their present location. This compensation package will be extended to all households that need to be relocated, irrespective of whether they currently have legal tenure or not.
5. In addition to those households requiring to be permanently resettled, an as yet undetermined number of households currently living in areas identified for slum upgrading will need to be temporarily relocated during upgrading. To the extent possible, this temporary relocation will be within the same area and will be for the minimum time needed before upgraded accommodation is made available.
6. The State Government has confirmed, that in line with the Bank's draft guidelines on resettlement, it will hold public consultations to determine compensation to households affected by relocation. A fundamental objective of the resettlement proposals will be that all persons displaced should benefit from the Project and that they should be at least as well off, and possibly better off, than they would have been without the Project.

Table 1: Status of Land Acquisition

Town / Project Component	Area Required (ha)	Land Acquired or Available (ha)	Balance of Land to be Acquired (ha)	Date by Which Acquisition Will Be Completed
<b>I. Mysore</b>				
Water Supply	42.00	0.50	41.50	31 Mar 1996
Sewerage	120.00	40.00	80.00	31 Mar 1996
Solid Waste (Landfill Site)	10.15	0.00	10.15	31 Mar 1996
Intermediate Ring Road	0.30	0.00	0.30	31 Mar 1996
Outer Ring Road	75.48	43.00	32.48	30 Jun 1996
Truck Terminal	8.00	0.00	8.00	30 Jun 1996
Residential Sites and Services	146.17	0.00	146.17	31 Mar 1996
<b>Subtotal</b>	<b>402.10</b>	<b>83.50</b>	<b>318.60</b>	
<b>II. Tumkur</b>				
Solid Waste (Landfill Site)	4.93	4.93	0.00	—
Sewerage	32.50	0.00	32.50	31 Mar 1996
Southern Bypass Road	45.00	5.00	40.00	31 Mar 1996
Residential Sites and Services	69.00	0.00	69.00	31 Mar 1996
Industrial Sites and Services	80.00	0.00	80.00	30 Jun 1996
<b>Subtotal</b>	<b>231.43</b>	<b>9.93</b>	<b>221.50</b>	
<b>III. Ramanagaram</b>				
Sewerage	9.25	0.00	9.25	31 Mar 1996
Solid Waste (Landfill Site)	3.31	0.00	3.31	31 Mar 1996
Bus Stand	2.00	0.00	2.00	31 Mar 1996
Residential Sites and Services	20.00	0.00	20.00	30 Apr 1996
Cultural—Cum—Commercial Center	0.05	0.05	0.00	—
Industrial Sites and Services	10.00	0.00	10.00	30 Jun 1996
<b>Subtotal</b>	<b>44.61</b>	<b>0.05</b>	<b>44.56</b>	
<b>IV. Channapatna</b>				
Water Supply <sup>a</sup>	11.00	0.00	11.00	31 Mar 1996
Solid Waste (Landfill Site)	2.28	2.28	0.00	31 Mar 1996
Residential Sites and Services	20.00	0.00	20.00	30 Jun 1996
<b>Subtotal</b>	<b>33.28</b>	<b>2.28</b>	<b>31.00</b>	
<b>TOTAL (I+II+III+IV)</b>	<b>711.42</b>	<b>95.76</b>	<b>615.66</b>	

<sup>a</sup> Combined scheme for Channapatna and Ramanagaram

## **TECHNICAL ASSISTANCE FOR THE RESOURCE MOBILIZATION STUDY FOR LOCAL GOVERNMENTS IN KARNATAKA**

### **A. Background**

1. There are in all 177 urban centers in Karnataka administered by urban local governments (ULGs), namely municipalities/corporations. Although existing arrangements provide for a variety of sources of revenues for the ULGs, most ULGs are financially weak and are often unable to meet their administrative and operative expenditures without grants from higher authorities. The Government's recent 74th Constitutional Amendment requires local governments to be self-sufficient in their revenue requirements. This objective of the Government can be achieved only through the introduction of a comprehensive revenue enhancement program for the local governments. Recognizing the need to support the local governments in this effort, the Government has appointed State Finance Commissions in each state. The Karnataka State Finance Commission is currently examining ways and means of improving the financial resource base of local governments in the State. The Government has requested Bank's assistance to support the Department of Housing and Urban Development (DHUD) and the State Finance Commission in its efforts in improving the ULG resource base. The proposed Technical Assistance (TA) is in response to this request.

### **B. Objectives**

2. The objective of the TA will be to prepare a comprehensive strategic plan for improving the financial resources initially for the Project towns of Mysore, Tumkur, Channarayana, and Ramanagaram, which would include examining appropriate steps for improving revenues from the following principal sources: (i) property tax, (ii) user charges on municipal services, (iii) property rents, (iv) shared taxes, and (v) other additional innovative measures. In preparing the plan, the experience of other states/local governments in India in resource mobilization should also be taken into consideration. It is intended to replicate the findings of this study to other towns and cities in Karnataka State.

### **C. Outline Terms of Reference**

3. In the carrying out of the terms of reference, the consultants will consult with the State Government and the KUIDFC in matters pertaining to the Study.

4. The terms of reference of the Study include the following:

- (i) The consultants shall review all existing sources of revenue and identify specific taxes and service charges that have potential for enhancement. Having identified this potential, they will review existing legislation to determine the scope of operationalizing such potential within the existing legislative framework.
- (ii) The property tax is the principal source of ULGs' revenue and there is enormous scope for enhancing revenue from this source. The consultants need to carry out an in-depth study of the present property tax procedures, with a view to determining how best the revenue from this source can be increased for ULGs. The main problems and the work needed to be done in this area are as follows:
  - (a) The system of assessment practiced is subjective and results in under-valuation by assessors. It also is subject to frequent disagreements and



legal disputes. There is a need to evolve an objective method for assessing properties for levy of tax.

- (b) Valuation assessments are not regularly updated, although there is provision for updating once every four years in the statutes. Where such reassessment is made, the increase does not reflect the full extent of increase that was justified. The consultants will be required to study the problems associated with reassessment of properties in the context of issues such as inflation, alterations to property, etc., and suggest a suitable formula for periodic reassessment and the frequency of revaluations.
  - (c) The courts have decided that valuations should be based on rental values and that properties that have fixed rents should be valued in terms of these fixed rents. The main problem is that under the rent control act, rents once fixed do not increase in line with inflation. There is an urgent need to examine the best way of ensuring standard and accurate valuations on this basis.
  - (d) Government land and buildings, which account for a significant portion of urban property, are not subject to property tax and the position in relation to public companies is being contested in the courts. The possibility of levying a service tax on government properties as happens in other cities such as Delhi needs to be examined.
  - (e) Identification of taxable properties on maps and other media is often poor. Improving this through cadastral and visual surveys, and tax mapping should be examined with recommendations on their use.
  - (f) Vacant sites in urban development authority layouts are frequently not taxed until the layouts are transferred to ULGs. The consultants need to study this issue and suggest a framework under which such properties could be brought under the tax net.
  - (g) Unauthorized properties frequently fall outside the tax net. The process by which unauthorized properties are notified and registered is frequently slow. The consultants shall look at improvements in the process from the point of view of increasing property tax collection.
  - (h) At present in many ULGs, properties located outside the ULGs' boundary receive urban services for which no charge is made to the beneficiaries. The consultants shall examine the possibility of extending the ULG boundary to enhance the tax net.
- (iii) Although the Government has recently issued notification to substantially increase water supply tariffs and sewerage charges, there is a need to study the existing charges; the consultants shall do so with a view to making recommendations as to how additional revenues can be generated from this source, keeping in view equity and affordability considerations.
  - (iv) ULGs also provide services such as public lighting, street sweeping, solid waste disposal, drainage, health service, etc. against which little direct revenues are

received from the beneficiaries. The scope and modus operandi for direct cost recovery on at least a few of these services need to be examined.

- (v) A proper system for ensuring the realizations of market rents on municipal properties such as markets, commercial complexes, etc., needs to be worked out. The scope for revenue enhancement from minor sources such as fees and licenses needs to be addressed.
- (vi) State-level authorities share the motor vehicle tax and the entertainment tax with ULGs. Especially in the case of the motor vehicle tax, ULGs feel that they deserve a higher share than the present 25 percent to meet expenditures on road maintenance and traffic management. ULGs collect health, education, library, and beggary cess on behalf of the State Government and are allowed to retain 10 percent of this revenue as collection charges. The system of sharing taxes needs to be examined in detail and recommendations made for improvements.
- (vii) The financial position of ULGs is further threatened as the recent amendments to the entertainment tax laws are expected to substantially reduce collections from this source, which has been an important source of funds for ULGs. The workings of the new "slab" system of assessing the entertainment tax should be reviewed.
- (viii) The consultants shall examine in detail how the role of the private sector can be enhanced in the delivery of urban services, so as to reduce ULG expenditures.
- (ix) The consultants shall prepare firm recommendations for a revenue enhancement program for the Project town ULGs and make recommendations as to how these could be replicated in other cities in the State.
- (x) The consultants shall prepare projections of the likely revenue implications, based on recommendations made, and quantify and analyze the total and increased revenue contribution from each tax source against total and increased cost increases in administration. Additionally, they shall evaluate all proposals in terms of the likely economic cost increases relative to the economic benefits to be realized from each option; assess the wider implications of increased taxation on business activity and equity; and review and assess the affordability of the recommendations.
- (xi) The consultants shall formulate a detailed program (including staff organizational plan) for implementing the proposed changes, to include an action plan that clearly indicates objectives, detailed tasks to be undertaken, agencies and persons responsible, target dates for completion, costs, and monitoring indicators of performance.
- (xii) The consultants shall identify clearly the various stages of approval needed to operationalize the recommendations made.
- (xiii) Based on proposals outlined above, the consultants shall review existing legislation and identify any amendments needed for operationalizing the proposals.
- (xiv) The consultants shall analyze staffing needs, including skills mix and levels needed for meeting the enhanced resource mobilization program.

- (xv) The consultants shall develop a training program for all levels of staff to assist in the operationalization of the program.

5. The TA will be carried out over a four-month period and will require 16 person-months of consulting services (8 international, 8 domestic), including expertise in municipal finances and urban planning. The consultants will be recruited in accordance with the Bank's *Guidelines on the Use of Consultants*.

6. The Karnataka Urban Infrastructure Development and Finance Corporation (KUIDFC) will be the Executing Agency for the TA and will implement the TA in close collaboration with the State Finance Commission.

7. The consultants will submit an inception report after three weeks in the field, which will be reviewed at a tripartite meeting among the consultants, the Government and the Bank. A draft final report will be submitted three and a half months after the commencement of the TA; this report will also be discussed at a tripartite meeting. The final report will be issued four months from the date of commencement, taking into account the comments of the Government, the State, KUIDFC, and the Bank. All the aforementioned reports will be submitted simultaneously to the State, KUIDFC and the Bank. All the aforementioned reports will be submitted simultaneously to the State, KUIDFC and the Bank.

#### **Estimated Cost of TA for Resource Mobilization**

<b>A. Bank Financing</b>	
1. Foreign Exchange Cost	\$'000
a. Remuneration and Per Diems of International Consultants	180
b. International Travel Cost <sup>a</sup>	13
c. Communications and Reports	5
d. Equipment	10
e. Study Tour/Familiarization Visit	35
f. Contingencies	<u>32</u>
Total	225
2. Local Currency Costs	
a. Remuneration and Per Diems of Local Consultants	40
b. Support Staff	5
c. Socioeconomic Surveys	8
d. Report Production and Supplies	5
e. Local Transportation	5
f. Contingencies	<u>12</u>
Total	75
Total (A)	300
<b>B. Government Financing</b>	
1. Office Accommodation and Utilities	10
2. Counterpart Staff Salary	4
3. Contingency	<u>1</u>
Total (B)	15
<b>GRAND TOTAL A + B</b>	<b><u>315</u></b>

<sup>a</sup> Includes the cost of a Government observer at consultants contract negotiations.

## FINANCIAL PROJECTIONS

### A. Urban Local Governments

#### 1. Assumptions

1. Financial projections for a 10-year period (FY1996 - FY2005) have been prepared for each of the four urban local governments (ULGs) to assess their financial sustainability. The major assumptions in the projections are described below.
2. Inflation - The general inflation rate is assumed to be 8 percent per annum over the period FY1996 - FY2005.
3. Revenue Enhancement Action Plan (REAP) - The State has agreed to implement suitable revenue enhancement measures designed to improve the financial position of ULGs within the existing legal and institutional framework. The focus of REAP is to maximize the revenue generation potential of property taxes and those other taxes and cesses that are determined on the basis of property values. Under REAP, property revaluations are assumed to be undertaken every four years in combination with increases in collections efficiency as well as the coverage of billings. The average rental value in each municipality, which is the basis for the property tax, is assumed to increase at an average annual rate of 12 percent over the forecast period. Through improvements in collections, ULGs are assumed to progressively reduce arrears and to maintain arrears at the equivalent of 90 days worth of billings from 1 April 1997.
4. Incremental Revenues from Bank Project - The incremental revenues to be derived from those components of the Project that can be operated on a commercial basis have been prepared and incorporated into the projections. The water supply and sanitation components of the Project account for most of these incremental revenues.
5. Other Revenues - Other revenues are projected on the basis of the past trends and likely future trends in each revenue line item.
6. Incremental Expenditures for the Project - Capital and operating and maintenance (O&M) expenditures for each component of the Project for ULGs have been estimated and incorporated into the financial projections.
7. Financial Structure of the Project - The capital cost of the Project is financed through a combination of grants from the State Government and loans. The water supply, sewerage, road improvements, bus/truck terminals, residential and industrial sites and services components of the Project are assumed to be financed entirely through long-term loans provided by the State Government. Each loan is assumed to be provided for 25 years, inclusive of a 5-year grace period, at an interest rate of 12 percent per annum. Debt service obligations are assumed to commence as of FY2002 (1 April 2001). All other Project components are assumed to be financed by grants.
8. Other Expenditures - Other capital and O&M expenditures are projected to increase at a rate at least equal to that necessary to maintain per capita spending at FY1995 levels. Increases in per capita spending are assumed for those municipalities generating revenues sufficient to support such increases.

## 2. Financial Projections

9. The financial position of ULGs over the forecast period is expected to vary, depending on the revenue base available to each ULG. The larger cities of Mysore and Tumkur have larger populations, which provide for a more significant tax base relative to the towns of Channapatna and Ramanagaram. As presented in Tables 1 and 2, Mysore and Tumkur are expected to be able to generate revenues sufficient to cover all expenditures, including those attributable to the Project, over the forecast period, given that they implement REAP. Projected revenues are sufficient to support annual increases of 2.5 percent in per capita spending in Mysore and 1.5 percent in Tumkur.

10. The financial position of Ramanagaram and Channapatna (Tables 3 and 4) is projected to be weaker because the smaller population and property base limit the potential for revenue generation. Ramanagaram is expected to be able to cover its expenditures until the commencement of debt service associated with the Project in FY2002. Over the FY2002-2005 period, revenues will cover only about 62 percent of expenditures. Channapatna is projected to incur relatively small deficits until FY2001. After generating a small surplus in FY2001, the commencement of debt service obligations will result in more significant deficits. Over the FY2002-2005 period, revenues are projected to cover only about 71 percent of expenditures. The relatively weak financial positions of Channapatna and Ramanagaram will likely limit these ULGs to spending increases to that needed to maintain per capita spending levels at FY1995 levels.

## B. Water Supply and Sanitation

### 1. Assumptions

11. Financial projections have been prepared for the Mysore water and sanitation component of the Project for a 10-year period (FY1996-2005) to assess the impact of the Project on the financial sustainability of the Mysore Division of Karnataka Urban Water Supply and Drainage Board (KUWSDB). The major assumptions are as follows:

12. Inflation - The general inflation rate is assumed to be 8 percent per annum over the FY1996-2005 period.

13. Project Implementation Period and Financial Structure - The construction period of the Project is FY1997-2001. Debt service, based on a 25 year term (inclusive of a 5-year grace period) and an interest rate of 12 percent, will commence in FY2002.

14. Tariffs and Operating Revenues - The State Government has authorized increases in water tariffs to be made effective from 1 February 1996. These increases are estimated to increase the average water tariff in Mysore by 75 percent. The impact of this increase on revenues will be spread over FY1996 and FY1997. In FY1997, it is assumed that a sewerage cess, equal to 30 percent of the water bill, is introduced. Further tariff increases are assumed to be implemented over the FY1997-2005 period so that by FY2003, the KUWSDB Mysore Division generates revenues sufficient to cover all O&M expenditures and debt service.

15. Operating and Maintenance Expenditures - O&M expenditures for the existing system and those facilities to be provided under the Project have been estimated on an annual basis over the forecast period. O&M expenditures for the existing system have been estimated

on the basis of current expenditures with adjustments made for inflationary price increases. Incremental O&M expenditures associated with the Project have been prepared on the basis of the estimated quantity and price of each input (personnel, power, chemicals, O&M materials, administration) for the levels of water production projected over the forecast period.

## **2. Financial Projections**

16. To provide for satisfactory levels of service from the existing system as well as from the proposed Project, tariffs will need to be increased by about 250 percent over the next 10 years (Table 7). While the required tariff increases are significant, the tariffs proposed are estimated to be affordable for the majority of the population based on the criterion that such charges should not exceed 5 percent of income. A household at the upper limit of LIGs (Rs2,650 per month) would pay approximately 2.7 percent of this income for water and sanitation upon the full implementation of the tariff increases. Even households earning only Rs1,250 per month should find the tariffs affordable as they would pay about 4.7 percent of their income for water and sanitation. While the most disadvantaged members of the LIG group may find the tariffs difficult to afford, it is envisaged that these households would be served by a network of public stand posts, for which a nominal charge will be made.

17. Based on the recommended tariff increases, the financial position of the Mysore Division of KUWSDB is projected to gradually improve so that by FY1998, revenues are sufficient to cover all cash O&M expenditures (Table 5). In FY2001, a 50 percent increase in tariffs designed to coincide with the commencement of service under the Project will increase the cash surplus to Rs112 million. With debt service payments beginning in FY2002, KUWSDB will incur a deficit of Rs37 million, which would be covered from previous surpluses. This deficit is expected to be temporary, with increasing surpluses being generated in FY2003 and subsequently as the Project provides for increases in water sales.

18. Projected revenues and expenditures for the water supply and sanitation Project components in Channapatna, Ramanagaram, and Tumkur have also been prepared and are incorporated into the financial projections for ULGs.

Table 1: Mysore City Corporation  
Projected Cash Flow Statements  
(Rs million)

Item	Actual				Estimated				Projected									
	FY1990	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005		
<b>Cash Inflows</b>																		
Taxes																		
Property Tax	24.30	24.64	27.68	30.18	37.76	43.08	51.82	94.61	116.23	141.86	154.91	266.18	290.67	317.41	346.61	595.58		
Entertainment Tax	22.67	27.12	30.09	26.85	35.57	33.00	35.64	38.49	41.57	44.90	48.49	52.37	56.56	61.08	65.97	71.24		
Health, Education, Library, and Beggary Cess	6.66	7.31	8.18	10.90	15.35	17.62	17.62	32.17	39.52	48.23	52.67	90.50	98.83	107.92	117.85	202.50		
Property Purchase Tax	4.24	5.15	6.14	8.82	8.38	10.00	11.20	15.74	14.05	15.74	17.62	19.74	22.11	24.76	27.73	31.06		
Motor Vehicle Tax	3.22	3.22	3.22	-	3.22	3.23	3.48	3.76	4.06	4.39	4.74	5.12	5.53	5.97	6.45	6.96		
Other Taxes	0.66	0.43	0.67	0.77	0.92	1.64	1.92	2.24	2.61	3.05	3.57	4.17	4.87	5.69	6.64	7.76		
Total	61.74	67.89	75.96	75.39	96.75	106.29	121.68	183.82	218.05	258.16	282.00	438.07	478.55	522.83	571.25	915.10		
Fees and Licences																		
Markets and Slaughteries	1.51	1.56	5.28	3.71	6.53	5.15	5.78	6.50	7.30	8.20	9.21	10.34	11.61	13.05	14.65	16.46		
Other Licences and Fees	4.94	5.63	9.77	17.08	8.63	9.52	11.11	12.98	15.17	17.72	20.69	24.17	28.24	32.99	38.53	45.01		
Total	6.45	7.18	15.05	20.79	15.16	14.67	16.90	19.48	22.46	25.91	29.90	34.51	39.85	46.03	53.18	61.47		
Charges for Municipal Services																		
Rent on Buildings and Land	1.82	1.67	1.21	2.21	3.31	5.00	5.60	6.27	7.02	7.87	8.81	9.87	11.05	12.38	13.87	15.53		
Recovery on HUDCO Scheme	5.36	2.32	10.60	2.61	2.62	2.00	4.00	6.00	6.72	7.53	8.43	9.44	10.57	11.84	13.26	14.86		
Incremental Revenues - Bank Project	-	-	-	-	-	-	-	-	5.46	9.65	14.30	53.47	112.32	152.82	179.07	198.04		
Other Receipts	2.06	2.92	2.46	3.15	3.90	4.37	4.91	5.52	6.20	6.96	7.82	8.78	9.87	11.08	12.45	13.98		
Total	9.23	6.90	14.26	7.98	9.82	11.37	14.51	17.79	25.40	32.00	39.36	81.56	143.82	188.12	218.65	242.41		
Otroir Compensation	25.29	28.45	32.01	35.80	41.73	48.99	52.91	57.14	61.71	66.85	71.98	77.74	83.96	90.68	97.93	105.77		
Grants from Central and State Governments	0.50	1.20	1.70	1.50	-	2.01	-	-	-	-	-	-	-	-	-	-		
Financing of Capital Works																		
Sale of Government Securities and FDRs	9.50	20.00	12.80	17.81	12.14	6.00	15.42	17.75	20.44	23.53	27.09	31.19	35.90	41.33	47.59	54.79		
Loans, Deposits and Advances	6.16	7.21	6.85	7.17	8.01	108.01	7.48	8.61	9.92	11.42	13.14	15.13	17.42	20.06	23.09	26.58		
Grants - Bank Project	-	-	-	-	-	-	-	2.95	30.97	39.83	17.72	11.81	-	-	-	-		
Loans - Bank Project	-	-	-	-	-	-	-	104.36	417.43	438.36	156.68	31.40	-	-	-	-		
Other Receipts	0.93	1.10	1.60	1.71	1.83	2.45	2.65	2.86	3.09	3.33	3.60	3.89	4.20	4.53	4.90	5.29		
Total	16.59	28.31	21.25	26.68	21.98	116.46	25.55	136.53	481.83	516.46	218.23	93.41	57.52	65.93	75.57	86.66		
<b>Total Cash Inflows</b>	<b>119.80</b>	<b>139.93</b>	<b>160.25</b>	<b>168.13</b>	<b>185.44</b>	<b>299.78</b>	<b>231.55</b>	<b>414.76</b>	<b>809.47</b>	<b>899.19</b>	<b>641.48</b>	<b>725.30</b>	<b>803.71</b>	<b>913.58</b>	<b>1,016.69</b>	<b>1,411.40</b>		
<b>Cash Outflows</b>																		
Operations																		
General Administration	9.34	11.38	11.26	14.61	14.80	19.18	22.09	25.43	29.27	33.70	38.80	44.67	51.43	59.21	68.17	78.48		
Public Health and Convenience	39.29	44.69	48.36	47.69	58.56	57.99	66.76	76.86	88.49	101.88	117.29	135.04	155.46	178.98	206.06	237.23		
Operations and Maintenance - Bank Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Other	6.86	9.75	13.61	30.37	26.35	32.22	37.09	42.70	49.16	56.80	65.16	75.02	86.37	99.43	114.47	131.79		
Total	55.49	65.82	73.23	92.67	99.71	109.39	125.94	144.99	166.93	192.18	234.58	289.60	359.54	422.13	485.22	591.72		
Capital Investment and Financing																		
Public Works	40.58	37.72	47.79	49.72	54.40	178.13	72.10	83.01	95.57	110.02	126.67	145.83	167.89	193.29	222.53	256.20		
Capital Expenditures - Bank Project	-	-	-	-	-	-	-	107.31	448.40	478.19	174.40	43.21	-	-	-	-		
Debt Service - Bank Project	30.47	33.65	26.84	41.79	27.85	35.09	40.39	46.50	53.54	61.64	70.96	81.70	94.06	108.29	124.67	143.53		
Repayments, Investments and Advances	71.06	71.38	74.63	91.51	82.25	213.21	112.50	236.82	597.50	649.85	372.04	270.74	450.26	483.00	521.73	567.37		
Total	126.55	137.20	147.86	184.17	181.96	322.60	238.44	381.82	764.43	842.03	606.62	560.33	809.80	906.13	1,006.96	1,159.09		
<b>Total Cash Outflows</b>	<b>126.55</b>	<b>137.20</b>	<b>147.86</b>	<b>184.17</b>	<b>181.96</b>	<b>322.60</b>	<b>238.44</b>	<b>381.82</b>	<b>764.43</b>	<b>842.03</b>	<b>606.62</b>	<b>560.33</b>	<b>809.80</b>	<b>906.13</b>	<b>1,006.96</b>	<b>1,159.09</b>		
<b>Net Cash Flow</b>	<b>(6.75)</b>	<b>2.73</b>	<b>12.40</b>	<b>(16.04)</b>	<b>3.48</b>	<b>(22.82)</b>	<b>(6.88)</b>	<b>32.95</b>	<b>45.04</b>	<b>57.16</b>	<b>34.86</b>	<b>164.97</b>	<b>(6.09)</b>	<b>8.45</b>	<b>9.63</b>	<b>252.31</b>		

Notes

Mysore municipality has been established as a City Corporation under the Karnataka Municipal Corporations Act of 1976.

Table 2: Tumkur City Municipal Council  
Projected Cash Flow Statements  
(Rs million)

Item	Actual			Estimated			P r o j e c t e d									
	FY1990	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
Cash Inflows																
Taxes																
Property Tax	1.87	2.61	3.79	4.55	4.92	5.71	6.94	18.52	22.55	27.28	29.53	50.29	54.43	58.92	63.77	108.62
Entertainment Tax	4.64	3.62	6.83	5.54	7.23	7.00	7.56	8.16	8.82	9.52	10.29	11.11	12.00	12.96	13.99	15.11
Health, Education, Library, and Beggary Cess	0.58	0.91	0.96	0.96	1.18	1.77	2.15	5.74	6.99	8.46	9.15	15.59	16.87	18.26	19.77	33.67
Property Purchase Tax	0.33	0.30	0.56	1.08	1.30	1.15	1.28	1.44	1.61	1.80	2.02	2.26	2.53	2.84	3.18	3.56
Motor Vehicle Tax	1.02	1.21	0.61	-	-	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.19	0.20	0.22
Other Taxes	0.41	0.59	0.73	0.83	0.91	1.68	1.95	2.25	2.60	3.00	3.47	4.01	4.64	5.36	6.19	7.16
Total	8.85	9.23	13.47	12.95	15.54	17.41	19.99	36.23	42.70	50.20	54.60	83.42	90.64	98.52	107.11	168.34
Fees and Licences																
Markets and Slaughteries	0.25	0.25	0.25	0.24	0.25	0.38	0.42	0.47	0.53	0.60	0.67	0.75	0.85	0.95	1.07	1.20
Other Licences and Fees	0.28	0.38	0.59	0.57	0.70	0.81	0.94	1.08	1.25	1.45	1.67	1.93	2.24	2.58	2.99	3.45
Total	0.53	0.63	0.84	0.81	0.96	1.19	1.36	1.56	1.78	2.04	2.34	2.69	3.08	3.53	4.05	4.65
Charges for Municipal Services																
Rent on Buildings and Land	0.05	0.67	0.57	0.65	0.67	2.25	2.52	2.82	3.16	3.54	3.97	4.44	4.97	5.57	6.24	6.99
Water Rates, Deposits and Connection Charges	0.58	0.94	1.33	1.15	1.24	1.29	2.58	3.88	4.34	4.86	5.45	6.10	6.83	7.65	8.57	9.60
Incremental Revenues - Bank Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Receipts	0.67	0.49	0.56	0.88	0.93	1.10	1.24	1.39	1.56	1.75	1.97	2.21	2.49	2.79	3.14	3.52
Total	1.30	2.10	2.45	2.68	2.84	4.64	6.34	8.09	9.06	10.16	11.38	20.30	28.90	31.93	35.28	38.98
Octroi Compensation	3.23	4.11	4.62	4.36	7.68	6.40	7.19	8.07	9.07	10.19	11.44	12.85	14.43	16.21	18.21	20.45
Grants from Central and State Governments	1.36	1.32	0.35	3.68	1.45	68.15	1.69	1.83	1.97	2.13	2.30	2.49	2.68	2.90	3.13	3.38
Loans Deposits and Advances	0.55	0.71	0.60	0.74	0.62	1.00	1.13	1.27	1.44	1.62	1.83	2.06	2.32	2.62	2.96	3.33
Grants - Bank Project	-	-	-	-	-	-	-	1.76	12.77	18.06	10.58	7.05	-	-	-	-
Loans - Bank Project	-	-	-	-	-	-	-	28.61	115.82	116.95	31.77	2.04	-	-	-	-
Total Cash Inflows	15.82	18.09	22.32	25.23	29.09	98.79	37.70	87.42	194.61	211.35	126.25	132.89	142.07	155.71	170.73	239.14
Cash Outflows																
Operations																
General Administration	2.22	2.23	2.93	3.63	3.86	4.35	4.91	5.54	6.24	7.04	7.94	8.96	10.11	11.40	12.86	14.51
Public Health and Convenience	7.82	9.46	10.12	12.49	15.18	17.12	19.32	21.79	24.58	27.72	31.27	35.27	39.79	44.88	50.62	57.10
Operations and Maintenance - Bank Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	10.04	11.69	13.05	16.12	19.04	21.47	24.22	27.32	30.82	34.77	41.82	54.60	67.68	75.63	84.52	98.87
Capital Investment and Financing																
Public Works	5.48	3.65	4.32	5.18	6.62	7.46	8.42	9.49	10.71	12.08	13.63	15.37	17.34	19.56	22.06	24.88
Capital Expenditures - Bank Project	-	-	-	-	-	-	-	30.37	128.59	135.01	42.35	9.09	-	-	-	-
Debt Service - Bank Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	5.48	3.65	4.32	5.18	6.62	7.46	8.42	39.86	139.30	147.09	55.98	24.46	65.75	66.19	66.93	67.98
Other Expenditures																
Other Expenditures	3.00	4.33	3.67	5.86	4.73	73.84	6.02	6.79	7.66	8.64	9.74	10.99	12.39	13.98	15.77	17.79
Total Cash Outflows	18.52	19.67	21.04	27.16	30.38	102.78	38.66	73.98	177.78	190.49	107.54	90.05	145.83	155.80	167.22	184.64
Net Cash Flow	(2.70)	(1.57)	1.28	(1.93)	(1.30)	(3.99)	(0.95)	13.44	16.83	20.86	18.70	42.84	(3.76)	(0.09)	3.51	54.50



Table 3: Ramanagaram Town Municipal Council  
Projected Cash Flow Statements  
(Rs million)

Item	Actual			Estimated			Projected									
	FY1990	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
Cash Inflows																
Taxes																
Property Tax	0.65	0.54	0.86	0.94	1.10	1.85	2.20	3.25	3.96	7.56	8.21	8.91	9.67	16.51	17.92	19.45
Entertainment Tax	0.78	0.07	0.50	0.78	0.84	1.10	1.19	1.29	1.39	1.50	1.62	1.75	1.89	2.04	2.20	2.38
Health, Education, Library and Beggary Cess	0.11	0.04	0.11	0.13	0.16	0.22	0.26	0.39	0.47	0.91	0.98	1.07	1.16	1.98	2.14	2.33
Property Purchase Tax	0.00	0.08	0.13	0.11	0.12	0.14	0.15	0.17	0.19	0.22	0.24	0.27	0.30	0.34	0.38	0.42
Motor Vehicle Tax	0.32	0.46	0.46	-	0.23	0.46	0.50	0.54	0.58	0.63	0.68	0.73	0.79	0.85	0.92	0.99
Other Taxes	0.00	-	0.01	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.87	1.19	2.07	1.96	2.44	3.77	4.31	5.63	6.60	10.81	11.73	12.73	13.81	21.72	23.57	25.58
Fees and Licences																
Markets and Slaughter Houses	0.04	0.05	0.10	0.09	0.08	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.28	0.31	0.35
Other Licences and Fees	0.14	0.18	0.17	0.21	0.27	0.31	0.36	0.42	0.48	0.56	0.65	0.75	0.87	1.01	1.17	1.36
Total	0.17	0.23	0.27	0.30	0.35	0.42	0.48	0.56	0.64	0.74	0.85	0.97	1.12	1.29	1.49	1.71
Charges for Municipal Services																
Rent on Buildings and Land	0.06	0.05	0.12	0.04	0.03	0.06	0.06	0.07	0.08	0.09	0.10	0.11	0.13	0.14	0.16	0.18
Water Rates, Deposits and Connection Charges	0.32	0.29	0.30	0.38	0.45	0.48	0.97	1.45	1.62	1.82	2.04	2.28	2.55	2.86	3.20	3.59
Incremental Revenues - Bank Project	-	-	-	-	-	-	-	-	0.08	0.14	1.93	15.13	31.66	36.13	40.13	44.59
Other Receipts	0.35	0.04	1.56	2.31	2.49	1.34	1.51	1.69	1.90	2.14	2.40	2.70	3.03	3.40	3.82	4.29
Total	0.73	0.37	1.98	2.73	2.97	1.88	2.54	3.21	3.69	4.19	6.47	20.21	37.37	42.53	47.31	52.64
Octroi Compensation	1.86	2.18	2.44	2.72	2.04	2.70	2.92	3.15	3.40	3.67	3.97	4.28	4.63	5.00	5.40	5.83
Grants from Central and State Governments	0.18	0.35	-	1.50	0.54	0.35	0.63	0.68	0.73	0.79	0.85	0.92	1.00	1.08	1.16	1.25
Loans Deposits and Advances	0.10	0.02	0.03	0.03	0.09	0.04	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.10
Grants - Bank Project	-	-	-	-	-	-	-	0.64	6.64	8.56	3.83	2.55	-	-	-	-
Loans - Bank Project	-	-	-	-	-	-	-	34.95	157.97	154.43	73.36	21.75	-	-	-	-
Total Cash Inflows	4.90	4.34	6.79	9.23	8.42	9.16	10.91	48.86	179.72	183.24	101.11	63.49	58.00	71.70	79.02	87.12
Cash Outflows																
Operations																
General Administration	0.52	0.52	0.64	0.83	0.99	1.07	1.19	1.33	1.48	1.65	1.84	2.05	2.28	2.54	2.83	3.16
Public Health and Convenience	1.53	3.15	4.23	3.04	3.39	4.91	5.48	6.10	6.80	7.58	8.45	9.42	10.50	11.70	13.04	14.54
Operations and Maintenance - Bank Project	-	-	-	-	-	-	-	-	(0.00)	(0.00)	5.05	13.37	21.18	23.46	25.65	36.62
Total	2.05	3.66	4.87	3.86	4.37	5.98	6.67	7.43	8.28	9.23	15.33	24.84	33.96	37.70	41.52	54.32
Capital Investment and Financing																
Public Works	1.42	0.64	1.36	3.49	3.11	2.76	3.07	3.42	3.82	4.25	4.74	5.28	5.89	6.56	7.31	8.15
Capital Expenditures - Bank Project	-	-	-	-	-	-	-	35.59	164.61	162.99	77.19	24.30	-	-	-	-
Debt Service - Bank Project	-	-	-	-	-	-	-	-	-	-	-	-	72.56	69.91	67.25	64.60
Total	1.42	0.64	1.36	3.49	3.11	2.76	3.07	39.01	168.43	167.24	81.93	29.58	78.45	76.47	74.57	72.75
Other Expenditures																
Other Expenditures	1.14	0.59	1.07	0.38	0.16	0.53	0.59	0.66	0.73	0.82	0.91	1.01	1.13	1.26	1.40	1.56
Total Cash Outflows	4.62	4.89	7.30	7.73	7.64	9.27	10.33	47.10	177.44	177.28	98.17	55.44	113.54	115.43	117.50	128.63
Net Cash Flow	0.29	(0.54)	(0.51)	1.50	0.78	(0.10)	0.58	1.76	2.28	5.95	2.94	8.05	(55.54)	(43.73)	(38.47)	(41.51)

Table 4: Channapatna Town Municipal Council  
Projected Cash Flow Statements  
(Rs million)

Item	Actual			Estimated			P r o j e c t e d									
	FY1990	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
<b>Cash Inflows</b>																
Taxes																
Property Tax	0.68	0.51	0.66	0.74	1.10	1.17	1.38	3.21	3.92	4.76	5.17	8.83	9.59	10.41	11.31	19.32
Entertainment Tax	1.07	0.46	1.55	0.90	1.07	1.15	1.25	1.35	1.45	1.57	1.69	1.83	1.98	2.13	2.31	2.49
Health, Education, Library, and Beggary Cess	-	-	0.13	0.08	-	0.15	0.18	0.42	0.51	0.62	0.67	1.15	1.25	1.36	1.47	2.52
Property Purchase Tax	0.05	0.10	0.09	0.09	0.05	0.18	0.20	0.23	0.25	0.28	0.32	0.36	0.40	0.45	0.50	0.56
Motor Vehicle Tax	0.38	0.54	0.27	-	0.40	0.50	0.54	0.58	0.63	0.68	0.73	0.79	0.86	0.93	1.00	1.08
Other Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2.18	1.61	2.70	1.81	2.61	3.16	3.55	5.78	6.77	7.91	8.59	12.96	14.07	15.27	16.58	25.96
Fees and Licences																
Markets and Slaughthouses	0.02	0.02	0.03	0.01	0.01	0.10	0.11	0.13	0.14	0.16	0.18	0.20	0.23	0.25	0.28	0.32
Other Licences and Fees	0.08	0.06	0.06	0.03	0.07	0.07	0.08	0.10	0.11	0.13	0.15	0.17	0.20	0.23	0.27	0.32
Total	0.10	0.08	0.10	0.04	0.08	0.17	0.20	0.22	0.25	0.29	0.33	0.38	0.43	0.49	0.56	0.63
Charges for Municipal Services																
Rent on Buildings and Land	0.20	0.20	0.21	0.29	0.22	0.25	0.27	0.31	0.34	0.39	0.43	0.48	0.54	0.61	0.68	0.76
Water Rates, Deposits and Connection Charges	0.15	0.20	0.29	0.36	0.39	0.59	1.17	1.76	1.97	2.20	2.47	8.50	19.57	22.93	25.72	28.86
Incremental Revenues - Bank Project	-	-	-	-	-	-	-	-	0.08	0.14	0.40	0.40	0.84	0.95	1.06	1.20
Other Receipts	0.06	0.13	0.06	0.40	0.02	0.37	0.42	0.47	0.53	0.60	0.67	0.75	0.84	0.95	1.06	1.20
Total	0.41	0.53	0.56	1.05	0.63	1.20	1.86	2.53	2.92	3.33	3.96	9.73	20.95	24.48	27.47	30.81
Octroi Compensation	1.58	1.10	1.13	2.34	1.99	3.20	3.46	3.73	4.03	4.35	4.70	5.08	5.48	5.92	6.40	6.91
Grants from Central and State Governments	0.03	0.27	1.58	1.34	0.48	2.10	0.56	0.60	0.65	0.71	0.76	0.82	0.89	0.96	1.04	1.12
Loans Deposits and Advances	0.01	0.01	0.07	0.63	0.02	0.90	1.00	1.12	1.25	1.39	1.55	1.73	1.92	2.14	2.39	2.66
Grants - Bank Project	-	-	-	-	-	-	-	0.71	4.29	6.41	4.24	2.83	-	-	-	-
Loans - Bank Project	-	-	-	-	-	-	-	18.27	77.72	80.85	35.36	9.33	-	-	-	-
Total Cash Inflows	4.31	3.61	6.14	7.21	5.81	10.73	10.63	32.97	97.89	105.23	59.49	42.84	43.74	49.27	54.43	68.10
<b>Cash Outflows</b>																
Operations																
General Administration	0.76	0.54	1.11	1.21	1.22	1.79	2.00	2.22	2.48	2.76	3.08	3.43	3.83	4.27	4.75	5.30
Public Health and Convenience	1.84	2.35	2.91	3.83	2.93	4.53	5.05	5.63	6.28	7.00	7.80	8.69	9.69	10.80	12.03	13.41
Operations and Maintenance - Bank Project	-	-	-	-	-	-	-	-	(0.00)	(0.00)	0.86	3.91	6.02	6.99	7.75	14.54
Total	2.60	2.89	4.03	5.03	4.15	6.33	7.05	7.86	8.76	9.76	11.74	16.04	19.53	22.05	24.54	33.25
Capital Investment and Financing																
Public Works	0.28	0.70	0.85	1.65	0.74	3.67	4.08	4.55	5.07	5.66	6.30	7.03	7.83	8.73	9.73	10.84
Capital Expenditures - Bank Project	-	-	-	-	-	-	-	18.98	82.01	87.26	39.60	12.15	-	-	-	-
Debt Service - Bank Project	-	-	-	-	-	-	-	-	-	-	-	-	36.33	35.00	33.67	32.34
Total	0.28	0.70	0.85	1.65	0.74	3.67	4.08	23.53	87.09	92.91	45.91	19.18	44.16	43.73	43.40	43.19
Other Expenditures																
Other Expenditures	1.28	0.87	0.66	1.27	1.53	2.84	3.17	3.53	3.94	4.39	4.89	5.45	6.07	6.77	7.55	8.41
Total Cash Outflows	4.16	4.46	5.54	7.96	6.43	12.83	14.30	34.92	99.78	107.06	62.53	40.66	69.77	72.55	75.48	84.84
Net Cash Flow	0.16	(0.85)	0.60	(0.74)	(0.61)	(2.10)	(3.68)	(1.95)	(1.90)	(1.83)	(3.04)	2.18	(26.03)	(23.28)	(21.05)	(16.74)

Table 6: Karnataka Urban Water Supply and Drainage Board - Mysore Division  
Projected Summary Cash Flow Statements  
(Rs million)

Item	Estimated		P r o j e c t e d										
	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005
Operating Data													
Water Sales and Production													
Water Connections (000)	61	64	67	69	69	73	75	77	88	106	114	117	117
Water Sales (000 m <sup>3</sup> /day)	76	76	76	76	76	81	83	85	98	117	127	130	130
Water Production (000 m <sup>3</sup> /day)	109	109	109	109	109	109	109	109	122	147	159	163	163
Unaccounted for Water (%)	0.30	0.30	0.30	0.30	0.30	0.26	0.24	0.22	0.20	0.20	0.20	0.20	0.20
Tariffs and Collections													
Average Water Tariff (Rs/m <sup>3</sup> )	0.95	1.54	1.84	2.48	3.23	4.04	4.44	4.88	7.33	8.06	8.86	9.75	10.73
Increase in Water Tariff (%)		0.62	0.19	0.35	0.30	0.25	0.10	0.10	0.50	0.10	0.10	0.10	0.10
Sewerage Cess (% of Water Bill)	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Cash Inflows													
Internal Sources													
Total Collections - Water and Sewer Tariffs	22.6	37.6	40.7	90.2	109.7	149.7	164.1	194.7	342.9	456.8	527.5	585.6	635.1
External Sources													
Total Government Equity Injections	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Term Debt - Bank Project	-	-	-	-	150.9	377.3	365.6	195.9	104.4	-	-	-	-
Long Term Debt - Other Projects	3.1	-	-	-	-	-	-	-	-	-	-	-	-
Total External Sources	3.1	-	-	-	150.9	377.3	365.6	195.9	104.4	-	-	-	-
Total Cash Inflows	25.7	37.6	40.7	90.2	260.7	527.0	529.6	390.6	447.2	456.8	527.5	585.6	635.1
Cash Outflows													
Operations													
Operating and Maintenance Expenditures	70.5	76.5	101.2	112.9	126.6	142.9	156.4	171.2	224.3	290.8	328.9	366.5	398.8
Capital Investment and Financing													
Total Capital Expenditures	12.1	12.6	11.6	3.0	154.2	380.9	369.4	200.0	108.8	4.8	5.2	5.6	6.0
Total Debt Service	2.8	2.9	2.8	2.7	2.6	2.4	2.3	2.2	2.1	197.8	190.5	183.3	176.0
Total Cash Outflows - Capital Investment and Financing	14.9	15.5	14.4	5.7	156.8	383.3	371.7	202.2	110.9	202.6	195.7	188.8	182.0
Total Cash Outflows	85.5	92.1	115.7	118.6	283.3	526.2	528.1	373.4	335.2	493.3	524.6	555.3	580.8
Net Cash Flow	(59.8)	(64.5)	(75.0)	(28.3)	(22.7)	0.8	1.5	17.2	112.0	(36.6)	2.9	30.2	54.3
Working Ratio	298%	207%	232%	200%	135%	106%	97%	93%	68%	66%	65%	65%	64%
Debt-Service Ratio (Times)	-16.83	-13.19	-21.44	-8.39	-6.56	2.75	3.31	10.74	57.48	0.84	1.04	1.20	1.34

**Table 6: Mysore Water Supply and Sanitation Component  
Projected Tariffs and Financial Performance Targets (Selected Years)**

Item	FY1996	FY1998	FY2000	FY2002	FY2005	Total Increase (%)	Average Annual Increase (%)
<b>Tariffs and Monthly Water &amp; Sewerage Bill</b>							
<b>1995 Prices (Excludes Inflation)</b>							
Domestic Water Tariff (Rs/m <sup>3</sup> ) <sup>1</sup>	1.47	2.56	2.66	3.76	3.97		
Sewerage Cess (%)	0	30	30	30	30		
Combined Water and Sewerage Tariff (Rs/m <sup>3</sup> ) <sup>1</sup>	1.47	3.33	3.46	4.89	5.17	251	13
Monthly Water and Sewerage Bill - (Rs) <sup>2</sup>	26	60	62	88	93	251	13
<b>Current Prices (Includes Inflation)<sup>3</sup></b>							
Domestic Water Tariff (Rs/m <sup>3</sup> ) <sup>1</sup>	1.47	3.23	3.91	6.45	8.58		
Sewerage Cess	0	30	30	30	30		
Combined Water and Sewerage Tariff (Rs/m <sup>3</sup> ) <sup>1</sup>	1.47	4.20	5.08	8.38	11.16	658	22
Monthly Water and Sewerage Bill - (Rs) <sup>2</sup>	26	76	91	151	201	658	22
<b>Financial Performance Targets</b>							
Working Ratio (%) <sup>4</sup>	230	110	95	70	70		
Receivables (Number of Days Worth of Sales) <sup>5</sup>	310	90	90	90	90		
Debt-Service Ratio (Times) <sup>6</sup>	NA	NA	NA	0.80	1.20		

**Notes:**

1. Average water tariff for domestic customers.
2. Based on average water consumption of 18 m<sup>3</sup> per month (120 liters per capita per day).
3. The projected local inflation rate is 8% over the FY1996 - FY2005 period.
4. Working Ratio: cash operating and maintenance expense divided by operating revenues.
5. Receivables (Number of Days Worth of Sales: Customer receivables divided by annual billings multiplied by 365 days.
6. Debt Service Ratio (Times): Gross internal cash generation divided by total debt service.

Table 7: Mysore Water Supply and Sanitation Component  
Affordability Analysis

Item	Estimated		P r o j e c t e d											
	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	
Tariffs and Monthly Bill														
Domestic Water and Sewerage Tariff (Rs/m <sup>3</sup> )	0.76	1.23	1.47	1.99	3.36	4.20	4.62	5.08	7.62	8.38	9.22	10.14	11.16	
Monthly Water Consumption - LIG Household (m <sup>3</sup> )	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	
Monthly Bill - LIG Household (Rs)	14	22	26	36	60	76	83	91	137	151	166	183	201	
Monthly Water Consumption - EWS Household (m <sup>3</sup> )	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
Monthly Bill - EWS Household (Rs)	11	18	22	30	50	63	69	76	114	126	138	152	167	
Household Incomes														
Upper Limit of LIG (Rs/month)	2,650	2,891	3,153	3,439	3,752	4,092	4,464	4,869	5,311	5,794	6,320	6,894	7,519	
Upper Limit of EWS (Rs/month)	1,250	1,364	1,487	1,622	1,770	1,930	2,106	2,297	2,505	2,733	2,981	3,252	3,547	
Percent of Household Income Devoted to Water and Sewerage														
Upper Limit of LIG	0.5	0.8	0.8	1.0	1.6	1.8	1.9	1.9	2.6	2.6	2.6	2.6	2.7	
Upper Limit of EWS	0.9	1.4	1.5	1.8	2.8	3.3	3.3	3.3	4.6	4.6	4.6	4.7	4.7	

## FINANCIAL AND ECONOMIC ANALYSIS

### A. General

1. The financial and economic analysis of the Project components has been undertaken following the approaches outlined in the Bank's *Framework for the Economic and Financial Appraisal of Urban Development Sector Projects*. In general, a financial analysis has been carried out for each of the major revenue generating components of the Project with a capital cost in excess of Rs15 million (\$500,000) and, in some cases, an economic analysis has been carried out on these components as well. For nonrevenue-generating components with quantifiable benefits and capital costs in excess of \$500,000, an economic analysis has been carried out.

### B. Financial Analysis

#### 1. Introduction

2. Project components that lend themselves to cost recovery, and hence financial analysis, include water supply and sanitation, residential and industrial sites and services development, the development of the Mysore truck terminal, and the cultural-cum-community center in Ramanagaram. For other components, only indirect cost recovery is possible and the extent to which this can be achieved will depend on the extent to which increase in land and property values, including rental values, resulting from improvements in urban infrastructure can be captured through modifications in land and property taxes and improved collection efficiency.

#### 2. Financial Internal Rate of Return of Project Components

3. The assumptions underlying the Financial Internal Rate of Return (FIRR) calculations are essentially the same as those described in Appendix 12 on financial projections, except that the analysis was carried out in 1995 constant prices.

4. For the industrial sites and services components of the Project, financial analysis has been conducted for representative development areas based on estimated site development costs and plot sale prices derived from recent similar developments. A similar approach to the financial analysis of the residential sites and services components has been adopted. For the truck terminal in Mysore and the cultural-cum-community center in Ramanagaram, the financial analysis has been based on expected development costs and on projected revenues from plot sales or facility rentals as appropriate.

5. The results show the following values of FIRR for Project components:

<u>Town</u>	<u>Component</u>	<u>FIRR (percent)</u>
Mysore	Water Supply	15.5
	Truck Terminal	14.1
Channapatna and Ramanagaram	Water Supply	7.6
	Cultural-cum-Community Center	2.6
Tumkur/Ramanagaram	Industrial Sites and Services	16.0
Tumkur/Channapatna/Ramanagaram	Residential Sites and Services	14.8

6. Sensitivity analysis carried out on these results shows them to be generally robust with respect to changes in the main parameters. A summary of the results of the sensitivity analysis is shown in Table 1.

## **C. Economic Analysis**

### **1. Costs**

7. The economic analysis of the Project components has been conducted in 1995 constant prices. The economic cost includes base costs and physical contingencies, but is net of taxes, duties, and transfer payments. The economic analysis has been conducted at border prices in national currency. A standard conversion factor of 0.8 has been used to convert all local financial and operating costs in economic costs, except for power costs for water and sanitation components where a conversion factor of 1.2 was applied to take account of the effect of distortions in the pricing of electricity. Foreign financial costs were assumed to equal economic costs. The opportunity cost of land was assumed to be equivalent to the price negotiated for its acquisition. The conversion factors used in the analysis are consistent with those used in recent World Bank studies.

8. In the economic analysis of the water supply components, account has been taken of the opportunity cost of raw water in alternative agricultural uses when that water is drawn from surface sources. The opportunity cost of water has been calculated from farm models and crop budgets developed for the area of influence of the regional main watercourses. Based on these, the opportunity cost of raw water is estimated to be Rs0.35/m<sup>3</sup>.

9. The average incremental cost of water production in the Project towns has been calculated in both financial and economic terms. For Mysore, the average incremental financial cost of water is estimated to be Rs4.11/m<sup>3</sup> while the average incremental economic cost of water is Rs3.65/m<sup>3</sup>. For the combined Channapatna and Ramanagaram scheme, the respective values are Rs7.00 and Rs5.37. The much higher values of the average incremental financial costs and average incremental economic costs for Channapatna and Ramanagaram relative to those for Mysore result from the provision under the Project of capacity in certain parts of the system that is additional to that needed under the Project but will permit cost-effective future expansion of the water supply in these two towns.

### **2. Benefits**

10. For the water supply components of the Project in Mysore and in Channapatna and Ramanagaram combined, benefits have been based on estimates of the consumers' willingness to pay for additional quantities and/or better quality of water supplies. The standard conversion factor has been used to convert benefits initially estimated in domestic prices to border prices.

11. The willingness to pay estimates have been derived, using a contingent valuation approach, from the results of the socioeconomic survey conducted under the project preparatory TA. This shows that, in general, there is considerable willingness to pay for improved water supplies, with willingness to pay being among the highest in the slum communities in Mysore, where the current expenditure per cubic meter of water is highest. On conservative assumptions, willingness to pay for improved water supply ranges from around Rs5/m<sup>3</sup> in Ramanagaram and Channapatna to Rs8/m<sup>3</sup> in Mysore. A willingness-to-pay of Rs 5/m<sup>3</sup>, in domestic prices, has been used for the initial years of the analysis of both water supply components mentioned

above. Moderate increases in willingness to pay have been assumed in later years. This is consistent with a growing understanding among beneficiaries of the benefits of an improved water supply. No economic analysis has been carried out on the water supply component in Tumkur, which comprises rehabilitation of and minor improvements to the existing system. Economic analysis has not been carried out for sanitation components as it is not possible to quantify the largely intangible benefits of improved sanitation to the direct beneficiaries and to the community.

12. For the roads components, of the Project two separate approaches have been adopted for the economic analysis, depending on the nature of the road under review. For the road rehabilitation components in Mysore and for the improvements to the intermediate ring road in Mysore, economic analysis has been based on estimated savings in vehicle operating costs accruing to road users in the with Project situation relative to the without Project situation for typical vehicles representative of the traffic using the roads in question. A conservative approach has been taken in the estimation of traffic growth and vehicle operating cost savings. Time savings for road users have been excluded from the analysis. Given the obviously limited expenditures on road maintenance in the past, no savings in road maintenance costs have been assumed. Instead, the analysis has been based on an expected increase in road maintenance expenditure in the future. For the road rehabilitation and upgrading component in Mysore, economic evaluations have been prepared for a representative sample of 6 of the 49 road sections to be included. Extensive sensitivity testing has been carried out on the results from these six sections to confirm the economic viability of this component. The results of the sensitivity tests are shown in Table 2.

13. An alternative approach has been adopted for the economic evaluation of the Outer Ring Road in Mysore and the Southern Bypass Road for Tumkur. Both are completely new roads that will pass through relatively undeveloped areas on the edge of the existing urban area. While these roads will attract some through traffic away from the congested centers of the towns in question, their main purpose is to open up new areas for development, thereby relieving some of the pressure for space in the existing town centers. Without construction of appropriate access roads, development of the peripheral areas of Mysore and Tumkur will not take place and the town centers will become increasingly crowded and congested with consequent decreases in the quality of urban life and increases in the costs associated with carrying out economic activities. The economic evaluation of these two roads has therefore been based on their potential developmental effect. The benefits from these roads have therefore been estimated in terms of the increase in land values that can be expected consequent to the construction of the roads and hence the provision of access. Conservative assumptions have been used in estimating the extent of the geographical area affected and the expected increase in land values. In both cases, the area of influence of the road has been assumed to be 250 meters on either side, whereas the increase in land values is estimated to be 40 percent. The increase in land values has been estimated initially in domestic prices and converted to border prices by use of the standard conversion factor.

### **3. Rates of Return**

14. The major indicators of economic viability for the Project are summarized in Table 2. All of the road components of the Project are clearly economically viable and are very robust with respect to the sensitivity tests. Base case EIRR in Mysore ranges from 35.5 percent to 73.6 percent for representative road rehabilitation and upgrading components, and is 21.5 percent for the improvement to the Intermediate Ring Road. The Outer Ring Road in Mysore has an EIRR of 53.1 percent whereas that for the Tumkur Southern Bypass is 32.9 percent.



15. The EIRR for the Mysore water supply component is 13.6 percent. For the combined Channapatna and Ramanagaram water supply component, the EIRR is 10.3 percent. In the case of all the water supply and sanitation components, large unquantifiable benefits can be expected to accrue, making the quantified EIRRs an underestimate of the overall economic value of the components. As was observed above, the Channapatna and Ramanagaram water supply component has been planned in such a way as to permit cost-effective future expansion of the system.

Table 1: Summary of Financial Evaluation

Project Component	Base Case (%)	Sensitivity Tests				Case 5 Combination of Cases 1, 2, 3 & 4
		Case 1 10% Increase in Capital Costs	Case 2 10% Increase in O&M Costs	Case 3 10% Decrease in Revenues	Case 4 1 Year Delay in Project Completion	
<b>Mysore</b>						
Water Supply	15.5	14.3 0.77	14.8 0.45	13.5 1.29	13.4	10.0
Truck Terminal	14.1	10.1 2.84	12.7 0.99	8.2 4.18	10.5	2.6
<b>Channapatna and Ramanagaram</b>						
Water Supply	7.6	6.7 1.18	7.3 0.40	6.4 1.58	6.8	4.7
<b>Ramanagaram</b>						
Cultural-cum-Community Center	2.6	1.3 5.00	2.1 1.92	1.1 5.77	1.8	-1.7
<b>All Four Project Towns</b>						
Industrial Sites and Services	16.0	11.9 2.56	15.7 0.19	11.5 2.81	6.6	-0.6
Residential Sites and Services	14.8	8.00 4.60	14.2 0.41	7.3 5.07	9.4	0.4

Table 2: Summary of Economic Evaluation

		Base Case (%)	Sensitivity Tests			
			Case 1	Case 2	Case 3	Case 4
			10% increase in capital costs	10% decrease in benefits	One year delay in benefits	Combination of Cases 1 and 2
<b>Mysore</b>						
Intermediate Ring Road	EIRR	21.5	19.9	19.6	15.6	18.0
	Sensitivity Indicator		0.74	0.88		
Road Rehabilitation and Upgrading						
(a) Chamraja Double Road	EIRR	73.6	69.8	69.0	56.0	65.4
	Sensitivity Indicator		0.52	0.62		
(b) Sawday Road	EIRR	57.7	54.5	53.8	45.2	50.8
	Sensitivity Indicator		0.55	0.68		
(c) Adi Chunchanagiri Road	EIRR	48.3	45.5	44.9	38.7	42.2
	Sensitivity Indicator		0.58	0.70		
(d) Gayathripuram Main Road	EIRR	35.5	33.3	32.7	29.4	46.3
	Sensitivity Indicator		0.62	0.79		
(e) Bannimantap Road	EIRR	53.0	50.0	49.3	42.0	65.3
	Sensitivity Indicator		0.57	0.70		
(f) Jhansi Lakshmi Bai Road	EIRR	71.8	68.1	69.0	56.0	65.3
	Sensitivity Indicator		0.52	0.39		
Outer Ring Road	EIRR	53.1	41.9	40.5	25.8	29.3
	Sensitivity Indicator		2.11	2.37		
Water Supply	EIRR	13.6	12.4	11.2	12.3	10.3
	Sensitivity Indicator		0.88	1.76		
<b>Tumkur</b>						
Southern Bypass Road	EIRR	32.9	23.5	22.1	16.9	12.3
	Sensitivity Indicator		2.86	3.28		
<b>Channapatna and Ramanagaram</b>						
Water Supply	EIRR	10.3	9.4	9.0	9.5	8.3
	Sensitivity Indicator		0.87	1.26		