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Case Study Infrastructure Privatization In India

The Tiruppur Area Development Programme

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I Background

- 1.01 Between 1991-2001, India will add about 163 million people to its population, of which 89 million will be in urban areas alone. In 1991, only 85% of the urban population had access to safe drinking water. Of the foregoing, 51% had household connections and another 34% obtained water from a drinking water facility within 0.5 kms of their residence. The target level of water supply for urban dwellings, as fixed by the the National Drinking Water Mission, is 140 litres per capital per day (LPCD), while for slums it is lower at 40 LPCD. As against this target, actual availability of drinking water varies widely. The average availability of water in slums is just 27 LPCD. However, inadequate quantity is only part of the problem, an emerging area of concern is the increasingly poor quality of water. Surveys reveal that 61% of the surface water supply sources for cities with population greater than 100,000 is highly contaminated. Current trends in urbanisation can only aggravate the problem further
- 1.02 The national target is to cater to the entire urban population through drinking water schemes by 2001. This means bringing in the benefits of drinking water supply and sanitation to more than 200 million people. Based on these trends and to meet the national target supply of drinking water and sanitation, an investment ranging from Rs 674 billion (US \$ 19.26 billion) to Rs 958 billion (US \$ 27.37 billion) would be required
- 1.03 Moreover, international experience has clearly demonstrated that there is a need for concurrently developing social infrastructure and amenities to attract investment flows. Social infrastructure covers a gamut of services including : provision of safe drinking water, sanitation, sewerage and drainage systems, garbage collection and disposal system, effluent treatment. While some of these have a direct impact on business enterprises and are amenable for development on a commercial format, others are more important for ensuring overall improvement in the standard of living of the local community
- 1.04 Such projects are funded mainly through government budgetary support, guarantees and through government funded financial intermediaries. Given the investment requirements, these sources of funds would be unable to finance more than 50% of the above requirements. As a result, governments at all levels have recognised the need to mobilize additional resources

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- 1.05 Government of India (GoI) has undertaken a number of initiatives in this regard. A Council of Urban Development Ministries was set up in 1993 to work out an agenda for reforms which included encouraging private sector participation in financing and implementing urban infrastructure facilities. Commercialisation and recovery pricing of urban services were identified as important strategies for financing such developments. Further, recognizing water supply and sanitation services as key infrastructure sectors, GoI has included it in the definition of infrastructure projects for availing of the tax benefits under Section 80 IA of the Income Tax Act, 1961
- 1.06 State governments are attempting a number of approaches to provide an appropriate framework for implementing urban infrastructure projects. One method is to identify a new area and position the same for development as a self contained business district, on the lines of the Industrial Model Towns as prevalent in many South Asian Countries
- 1.07 In addition, a few State Governments are in the process of promoting Municipal Development Funds to enable municipal bodies to finance such projects. These funds are expected to operate on a commercial basis and leverage public funds through market borrowings. Another important development in this regard is the constitutional amendment under the 74th Constitution Amendment Act (1992) which empowers a Municipal Authority to seek additional sources of revenue
- 1.08 Municipal bodies are also developing innovative mechanisms for mobilising resources from non-tax sources such as asset securitisation, Municipal bonds, etc. The city of Ahmedabad is likely to be the first city in India to issue Municipal bonds. The experience gained could provide a role model for similar development in other cities
- 1.09 As is evident from the aforementioned, the central, state and local governments have become more receptive to private initiative in the infrastructure sector, in general, and the urban infrastructure sector, in particular. However, the private sector given the magnitude of the risks involved; the long gestation and payback periods; and the large external benefits associated with such projects; cannot undertake these ventures by itself without active support from the governments involved. This has led to the emergence of a joint venture implementation format which is akin to a partnership or "marriage" between the public and private sectors. It was precisely this new outlook which prompted the Government of Tamil Nadu (GoTN) to invite the private sector to design, build, operate, maintain and finance urban infrastructure facilities in Tirupur as a co-investment project with both public sector and private sector participation

1.10 As the Tiruppur Area Development Programme is the first scheme of its kind in India to be financed mainly through non-budgetary resources, it could provide useful pointers for the implementation on commercial lines of other urban infrastructure schemes in the country. Therefore, this note focuses on the deviations from the conventional urban infrastructure project implementation framework followed so far, with a view to highlighting the salient features of a successful public-private partnership. It also seeks to outline the additional steps that need to be taken in order to successfully and rapidly replicate the experience elsewhere in India

II Implementation Framework

Institutional Change

2.01 The Tiruppur Area Development Programme comprises several project components, not all of which are commercially viable. Therefore, the implementation of the Tiruppur Area Development Programme (TADP) within a commercial framework necessitated the establishment of institutional and legal structures to enable:

- (i) raising of commercial resources;
- (ii) operating and maintaining assets created on a commercial basis; and
- (iii) interfacing with existing local institutions.

2.02 The municipality, a department or an agency of the state government would not have been an appropriate vehicle for mobilising the quantum of commercial resources required for the proposed area development programme. This is because municipal regulations, finances and administrative practices do not provide a framework to enable this. The financial position of the Tiruppur Municipality (TM) for the years 1990-91 to 1992-93 given below underscores this fact. It would also have been the case that the Municipality would have required significantly greater credit enhancement than otherwise

Financial Position of the Municipality : 1991-92 to 1994-95

Items	1991-92		1992-93		1993-94		1994-95	
	US \$ Mn	Rs Mn	US \$ Mn	Rs Mn	US \$ Mn	Rs Mn	US \$ Mn	Rs Mn
Receipts	3.74	130.83	2.79	97.76	3.52	123.12	4.40	153.83
Expenditure	3.88	135.67	3.38	118.14	4.04	141.27	4.20	147.13
Balance/Surplus	-0.14	-4.84	-0.58	-20.38	-0.52	-18.15	0.19	6.70

Source : Annual Accounts - Tirupur Municipality

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2 It thus became necessary to create a separate legal entity or Special Purpose Vehicle (SPV) to implement the TADP on a commercial format. Consequently, a Special Purpose Vehicle (SPV) called the New Tiruppur Area Development Corporation Limited (NTADCL) was incorporated as a public limited company under the Companies Act 1956.

2 The NTADCL has been promoted jointly by Tamil Nadu Corporation for Industrial Development (TACID), Government of India (GoI), Tiruppur Exporters Association (TEA) and Infrastructure Leasing and Financial Services (IL&FS). TACID, which represents Government of Tamil Nadu in this project, has been authorised by GoTN to implement the TADP as a commercially viable proposition, under theegis of the NTADCL. TEA is one of the major consumers of NTADCL's services.

2.05 The NTADCL is the project authority for implementing all the projects namely:

- (i) Water Supply;
- (ii) Municipal Sewerage Collection, Treatment & Disposal;
- (iii) Industrial Effluent Collection, Treatment & Disposal; and
- (vi) Site Development

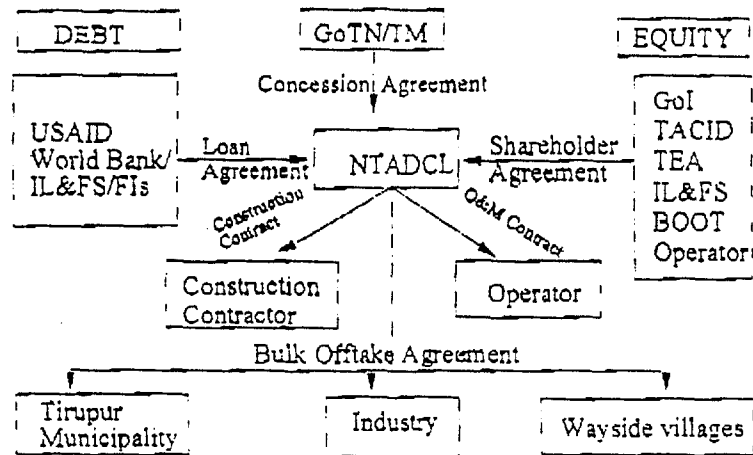
2.06 Since, site development is commercially well understood it can be privately financed and implemented on a stand-alone basis, unlike the remaining sub-components of the TADP. Therefore, site development would be implemented as an independent project separate from the rest. The surpluses from site development would however, be plowed back as tier II equity to finance the other three sub-components.

2.07 In order to implement the water supply, municipal sewerage, and industrial effluent projects, the NTADCL plans to enter into a concession agreement with the GoTN and TM. The Concession would make the NTADCL the owner of the TADP and responsible for its implementation, operation and maintenance. In return, the NTADCL would be given the right to the revenue streams emanating from the TADP in order to recoup its costs and earn profits.

- 2.08 In fulfillment of its contract with the GoTN and TM, the NTADCL proposes to contract out its obligations to build, operate and maintain the water supply system, sewerage system and industrial effluent system. It would enter into both a fixed price construction contract with a qualified construction contractor and an operations & maintenance agreement with an experienced water and wastewater systems operator. The agreements would set out the obligations and benefits which will be received by the contractor and operator from NTADCL and vice-versa
- 2.09 The contractor and operator would be selected through an international competitive bid on the basis of technical viability, environmental safety and cost of water. Since the two, generally team up in the form of a consortium to bid for the TADP, they will hereinafter be referred to as the BOT Operator. The selected BOT Operator would be the one providing the abovementioned services using technically viable and environmentally safe facilities and operating procedures at least cost
- 2.10 To ensure revenues the NTADCL would enter into water purchase agreements with bulk consumers viz TM and TEA. The agreements would fix the bulk water prices, quantity and quality of water as well as the responsibilities for billing customers, collecting water charges, maintaining the local distribution network. The agreements would also include a commitment to index water charges to the rate of inflation and to provide minimum water purchase guarantees by the consumers
- 2.11 The framework would enable the NTADCL to : (i) raise commercial resources; (ii) build, operate and maintain assets in accordance with market principles; (iii) interact with the project's operating environment. This is effected by harnessing the competencies of each partner. Thus TACID, TEA and IL&FS would primarily act as the interface between the NTADCL and : the various levels of government; the consumers; and the lenders respectively. The BOT Operator, on the other hand, would mainly take the initiative in design, implementation and operation of the system. Further, both IL&FS and the BOT Operator would be responsible for raising resources
- 2.12 The composition of the Board of NTADCL reflects equity stakeholder and other strategic interests. Thus at present, the board comprises four directors from TEA, two from IL&FS, one from TACID, one from GoTN and one from GoI. In the last meeting of the Board, it was decided to also induct as director on the Board a representative of the municipal administration

The diagram provided overleaf gives a summary description of the implementation structure

Proposed Implementation Structure



Regulatory Change

2.13 The recommended structure for the implementation along with the basis for ensuring the commercial viability of the programme was discussed with the GoTN, its agencies, Tirupur Municipality, Tiruppur Exporters Association and potential lending agencies. As an outcome of these discussions the GoTN and TM agreed in-principle to implement the project on commercial terms. These terms included :-

- (1) GoTN willingness to implement municipal service programmes on a commercial basis; and to participate in technical assistance and training programmes for the same

- (2) As a first step in this direction, GoTN and TM authorised the implementation of the TADP on a commercial format. To facilitate this they:-
- (i) Allowed the establishment of a project specific entity, NTADCL, with equity participation from local representatives, GoTN, GoI and Financial Institutions;
 - (ii) Allowed NTADCL to draw water from the confluence of the Cauvery and Bhavani rivers
 - (iii) Allowed NTADCL, a water utility operated on commercial lines, to supply water in bulk to TM
 - (iv) Allowed direct cost recovery from services provided by the TADP through appropriate user charges
 - (v) Agreed to provide support in the form of land for commercial development; and allowed reinvestment of surpluses from land development into the other projects of the TADP
 - (vi) Allowed experienced domestic or international BOT Operators, selected via an international competitive bidding process, to implement the TADP
 - (vii) Allowed commercially viable arrangements for, inter alia, revenue collection, operation & maintenance activities
 - (viii) Agreed to regulating ground water use by industry
 - (ix) Agreed to insure industrial compliance with the environmental protection guidelines set down by NTADCL
 - (ix) Agreed to facilitate the acquisition of clearances for the TADP from local, state and central government authorities

Institutional Capacity Building

- 2.14 Since the TADP is a complex project with no known precedent, promoters of the NTADCL, TM and other government agencies, such as the Tamil Nadu Pollution Control Board (TNPCB) require technical assistance and training to enhance their capabilities to implement and regulate it better. As all these agencies have separate mandates, it has become necessary to formulate different technical assistance and training programmes for them
- 2.15 For instance, the major areas of technical assistance and training for the promoters of NTADCL viz. GoTN, GoI, TEA and IL&FS being covered are : BOT Operator selection and contract negotiation procedures; legal and financing functions; operation and maintenance; etc
- 2.16 In case of the Tiruppur Municipality it is necessary that it have an adequately trained and motivated staff to collect water charges from households and industry within its boundaries. Thus its staff is being trained in revenue management, capital budgeting, management information systems, commercial accounting practices particularly those relating to receivables management such as billing practices, personnel management, contractual practices
- 2.17 The Tiruppur Municipality also needs to install automated billing systems, and have greater automation in operations and metering for water supply. It, therefore, is in the process of procuring technical assistance for the same

2.18 An indicative list of Technical Assistance & Training being undertaken by the various agencies involved in the TADP is provided below :

	Technical Assistance & Training	Beneficiary Institution
1	Development of capacity of finance institution to originate, service and place project revenue bonds with investor	IL&FS
2	Improvement of capacity to formulate viable projects, undertake dynamic spatial planning integrated with capital improvement, to provide land information system, structure partnerships with pvt sector enterprises, to solicit, construct, manage pvt sector providers	TM/TCPD/TACID
3	Improvement of Legal and Regulatory Frameworks	GoTN/TACID/TM
4	Improvement of underwriting capacity	IL&FS
5	Selection of BOT Operator	IL&FS/TACID/TEA
6	Improvement of ability to co-ordinate planning between municipal corporations and other government authorities	TM/TCPD/GoTN
7	Improvement in capacity of local bodies to co-ordinate operations & maintenance and cost recovery	TM
8	Improvement in technology awareness, environmental regulations, environmental standards and conduct of environmental impact analysis	SPCB/GoTN/TM

Note: GoTN Government of Tamil Nadu
TACID Tamil Nadu Corporation for Industrial Infrastructure Development
TM Tiruppur Municipality
TEA Tiruppur Exporters Association
SPCB State Pollution Control Board
TCPD Town and Country Planning Directorate, GoTN

III Way Forward

- 3.01 Though considerable progress has been made in encouraging private sector participation in the urban water and sanitation sector, certain additional measures are necessary to expedite this process. Initiatives are required on two fronts, first project development; and second, development of a long term debt market

Project Development

- 3.02 If an increasing number of projects are to be posed under a commercial format expeditiously, there is a need to undertake comprehensive project development. Such project development would lead to a full identification of all project parameters including a review of technological requirements and environmental constraints. The project could then be posed to potential project sponsors and lenders and investors
- 3.03 The effort would encompass technical, environmental, financial and contractual frameworks but will stop short of detailed design engineering

Thus the project development document would provide :

- | | |
|---------------------------------------|--------------------------|
| - Project definition | - Contractual frameworks |
| - Techno-economi studies | - Legal frameworks |
| - Environmental and social assessment | - financial IRR |
| - Projet structure | - ERRs |
| - Financing structures | - Risk management plan |

- 3.03 The responsibility for project development is increasingly being viewed as the responsibility of the Government. The Government could pose the project for private sector participation once the project is fully developed

Development of a Long-Term Debt Market

- 3.04 As typical projects in this sector have payback periods ranging from 15 to 30 years and high construction period risk, it becomes necessary to include a layer of long terms financing when deciding the financing risks for such projects. The tenor of such debt generally varies from 20 to 30 years. At present, long term debt of this nature is not available in India
- 3.05 Factors constraining the long-term debt market for urban infrastructure projects include : limited number of players with deep pockets; municipal regulations and practices and credit enhancement and backstop issues. A number of institutional measures have been suggested to remedy this situation, the prime among them being establishment of Urban Infrastructure Funds and development of a Municipal Bonds Market

3.06 There are a number of projects at the municipal/local authority level that could be developed under a commercial framework. Such projects could have discrete segments : those that are commercially viable, softer components and components that cannot be commercialised. Thus the aggregate project IRR would be below commercial financing costs. An Urban Fund could conceivably be structured with different tranches such as :

- | | | |
|---------------------|---|------------------------|
| - State Governments | : | Softer rates |
| - Multilaterals | : | Grants/Cheaper Finance |
| - FIs | : | Commercial financing |

Thus the fund could delineate its tranches in relation to the project. On a weighted averaged basis the financing delivered to the project could be managed. The Asset Management Company (AMC) for the Fund could evaluate and manage the investments. The AMC could over time use the skills developed to work with local authorities on their reform agenda. The first such fund is being set up in Tamil Nadu with the assistance of the World Bank

3.07 Municipal bonds could become the mainstay of the Urban Infrastructure sector provided : Central and State Governments enact enabling legislation; and develop and effective institutional framework; for the development of the bond market. This would require, inter alia :

- Amendment to the Local Authorities Act, 1914 providing for greater autonomy in raising resources from the market
- Ability of local bodies to set user charges at levels facilitating cost recovery
- Assignment of better revenue sources to municipalities
- Change in accounting practices, such as separation of project and non-project accounts
- Development of institutions for the provision of credit enhancement
- Development of market makers
- Provision of fiscal incentives for investments in municipal bonds