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ADDRESSING URBAN ENVIRONMENTAL PROBLEMS IN BRAZIL THROUGH PRIVATIZATION

Case Studies of Citizen Participation and
Pricing Policies and Techniques in Selected Cities

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November, 1996

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and Techniques in Selected Cities**

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PROLOGUE

Basic sanitation is a problem for cities all over Brazil. In the State of São Paulo, one of the nation's wealthiest states, water supply and wastewater collection reach ALMOST 100% of the population. A fraction of that wastewater is treated, however. Most of that treatment relates to specific industrial needs.

In the three cities that are the main subject of this study wastewater treatment is a priority. All three cities now have Water and Wastewater Departments that are financially healthy, and are financially independent of City Hall. They are all taking the initial steps to install treatment plants. They are all wealthy cities. They have not suffered the uncontrolled growth of many Brazilian cities. They are examples of a certain type of Brazilian city, not the average Brazilian city.

Furthermore, they are all experimenting. New methods and formats for contracting and for financing are developed as each new project to build and operate a wastewater treatment plant goes forward. There is no manual. Some mistakes have become obvious. Most remain to be discovered. Many essential questions remain unanswered, not for lack of interest, but because the experience has produced no answers.

At this same time there is a great deal of experimentation with citizen participation. The traditional city government procedures for review and approval of investment are being opened to public debate. Many government officials have made "transparency" an objective. The use of private enterprise to provide municipal services is being questioned in this public debate, and organizations not previously involved are being asked to make choices and set priorities.

This study will review the water supply and wastewater treatment conditions in Ribeirão Preto, Piracicaba and Araraquara. It will also describe the plans and

projections, and the political context in which they are being developed. It is not possible, however, to review these specific cases without reflecting on the unanswered questions that have a national scope. This will be done in the concluding chapters.

Chapter 1

THE CASE OF RIBEIRÃO PRETO

1 Ribeirão Preto – Background

Ribeirão Preto is a city of nearly 500,000 population located in the tropical highland of São Paulo State, some 300 kilometers from Brazil's largest city, São Paulo. The area is agriculturally productive, and the principal crop today is sugarcane. The city has a per capita income at \$5,500, nearly double the average for Brasil, the result of the contribution of some 3000 industrial plants as well as supporting organizations including universities, hospitals and research centers.

The City draws all its water from ground wells as it lies above one of Brazil's largest underground aquifers with supplies estimated good for at least another 100 years. Water is supplied to 100% of the City's households and organizations, and wastewater collection is available to 96% of those users.

1.1 The First Wastewater Treatment Plan

Wastewater is channeled into the Rio Pardo. In the late 1980's, in recognition of a need to treat wastewater, and not just collect it and send it downstream, the Ribeirão Preto city government commissioned a study of the needs and the related costs of treatment. The consulting team identified a R\$60 million investment to produce a high quality wastewater treatment facility. No action was taken at the time as the City did not have the resources to carry out such a project, nor did the various State and National Government Authorities

1.2 Political and Administrative Change in 1992

Wastewater treatment was an issue in the election campaigns of 1992. One result was a change of the Mayor and other City administrators. Another was a more open and pragmatic approach to City management. These changes led to adoption of a program to modernize the water and wastewater system and to improve the financial health of the City's Water and Sewer Department (Departamento de Água e Esgotos de Ribeirão Preto – DAERP). Wastewater treatment, at the time, was limited to small, isolated plants, or about 3% of the wastewater flow.

1.3 Tariff Policy

The Water Department's finances were strengthened by better metering, increases in rates for larger volumes, and a differentiation between residential, commercial, industrial and public sector users. Today, monthly receipts run at about R\$3 million per month. Roughly 20% of these receipts are plowed back as investment in the system. In spite of the increases, the Department feels that the tariff levels are reasonable, as they are well below the average for 27 municipalities in São Paulo State, and are less than one-third the charge for low volume users set by the State Water and Sewer Company, SABESP. (See Annex 1)

In Ribeirão Preto some 70% of users pay between R\$2.50 and R\$10.00 per month for their water supply and wastewater collection service. The DAERP reports that late payments from residential users run at around 15% of billings, but also reports no evidence that late payment is a result of low household income.

The use of a tariff system scaled according to volume of use, and, in addition, differentiated for residential, commercial, industrial and public sector users is common to many of São Paulo State's municipalities, and reflects an evolution from the late 1980's when it first became clear that more effective tariffs would be needed to ensure the financial health, and future investment capability of water utilities.

The Department does subsidize not-for-profit organizations, applying the minimum rate regardless of volume. Federal, State and City Government agencies are charged at the highest levels because these organizations are notoriously slow payers.

2 A Private Enterprise Concession

With wastewater treatment a campaign issue in 1992, the new city administration was committed to resolving the problem. Thus a team of officials and consultants began to restructure the earlier wastewater treatment plan in order to bring the costs within reach. The resulting program would be designed

- to provide treatment for the largest possible percentage of the total wastewater collected;
- to develop a program whose costs fit the realities of the City and the Department's budget; and
- to use joint ventures with the private sector so as not to burden Water Department personnel resources, necessary for improved system maintenance.

The resulting program called for construction of three treatment plants using the activated sludge process. One, due to watershed conditions, would serve 90% of the 500,000 population, and the other two, the remaining, 10%.

The completed project would require an investment of some R\$30 million and City officials decided that the plants would have to be constructed on a BOT (build, operate, transfer) basis, to ensure that the builder assumed full responsibility for the long term viability of the project.

2.1 Financing

Arranging the financing became a critical issue. The main source of funds for private sector involvement in sanitation projects is the Banco Nacional de Desenvolvimento Econômico e Social – BNDES, which invests on behalf of the Fundo de Amparo do Trabalhador – FAT, a salary deduction designed to generate retirement savings. At present, the BNDES-FAT is sufficient to meet a demand above that being requested. The projects must be financially viable, and carry the full set of performance, indemnization, bridge-loan and long term loan guaranties that any private sector bank would require.

Thus any municipality interested in moving forward with a wastewater treatment project will be motivated to look to a public-private partnership to qualify for BNDES financing.

2.2 Partnership with the Private Sector

The Federal Constitution of 1988 identifies those services that are the responsibility of the public sector. Water and wastewater supply and treatment are among them. At the same time, the Constitution does call for a broader involvement of private enterprise in the delivery of such services and paves the way for a law that would establish the ground rules for public-private partnership through a concession contract. This law, no 8987/95, Lei da Concessão e Permissão da Prestação de Serviços Públicos no Brasil was passed in 1995. The accompanying regulations have not yet been approved.

2.2.1 Citizen Resistance

Even though the option to use private enterprise to provide services is sanctioned by law, municipal governments must still deal with resistance to the concept on the part

of the public, and, perhaps more energetically, on the part of public sector employees.

At the time it was considering a concession to build and operate the large wastewater treatment plant, Ribeirão Preto's Government already used the private sector to deliver public services. Garbage collection was being handled under a contract with a private concern (a São Paulo-based firm, REK). This contract, however, was not a "concession" under the terms specified in Brazilian law, but rather a more limited contract for operation of the service, with the City retaining control of the revenues and paying the contractor on a performance basis. Thus "ownership" of the service was not in question, as it might be in the case of a concession.

In the case of the garbage collection contract, the contractor does maintain direct contact with each user (household, commercial establishment, etc.), receiving complaints, resolving problems, etc. Because the service has been well managed, it has given a good impression of the private sector at work providing municipal services.

Use of a concession, nevertheless, suggested to the public a loss of control over a basic service, and to the public sector employee the possibility of reductions in force and a dismantling of the security traditionally associated with public sector employ.

2.2.2 Orçamento Participativo

At the same time that the DAERP was working up the conditions for concession of the wastewater treatment plant, the City embarked on an budget review process that invited active citizen participation. This process had been tried in Porto Alegre with considerable success, though in the case of Ribeirão Preto it met with initial resistance from City Council members. These elected officials were justifiably apprehensive that an open budget review process would diminish their impact as the elected representatives of the citizenry.

The stimulation of citizen interest and participation in decisions relating to the capital investment components of the annual budget, some 35% of the total, did result in better organization of the public voice, and public recognition that it was vital to establish priorities among the many services deemed necessary. The resulting commitment to the budget in fact simplified the task of the City Council and the Executive as the citizenry were fully implicated in the decisions taken. This experience was to provide a foundation for the upcoming deliberations relating to the wastewater treatment plant concession.

2.2.3 Attracting Private Enterprise

On the other hand, the Municipality was faced with the problem of attracting private enterprise to the project. The R\$30 million cost of the project being suggested by the consultant team, seemed large enough. Word was out, however, that some private concerns would not be interested in only the "downstream" component of the system. This concern was supported by the experience of the neighboring city of Limeira, where the French utility and construction giant, Lyonnaise des Eaux would only bid on, and had won a concession for, the complete water supply and wastewater collection and treatment system.

A further problem resulted from the large losses that characterize most water supply and wastewater collection systems in Brasil. Ribeirão Preto was no exception, with the difference between water sent into the system, and water metered and charged for was approximately 35%. Thus there was the risk that the concessionaire would be treating a larger volume of water than it could bill for.

Finally, if the concession were to be for a long period of time, 20 years in the Ribeirão Preto case, what guaranties would be required, either in terms of adjustments to tariffs, or as related to the bank financing and the cash flow?

3 Chronogram of the Project Contracting Process

3.1 Amending Municipal Law

In the absence of any national legislation regarding concessions with private enterprise (not passed until 1995), the City passed its own legislation providing for use of this mechanism for wastewater treatment. The Law was passed in July 1994, following the first of three public meetings (audiência pública) organized to present the project and to garner public support. The public meetings were given extensive publicity so as to attract a attendance. The response was comensurate in each instance. In the end, the Law passed with 18 of the 21 City Council Members in support.

Law no. 363 amended the basic municipal statutes to allow the Mayor to

- contract with private enterprise on a "build-operate-transfer" basis the collection; transport and treatment of the City's wastewater;
- establish the conditions for the bidding and contracting process;
- expropriate land as necessary;
- monitor the contractor's performance; and
- set tariffs in accordance with the contracted agreements.

3.2 Design and Concessionnaire Selection

The second public meeting was held in late July, 1994 following passage of the Law, and was designed to allow for review of the draft contract document. This meeting focused on the contracting process, the guaranties to be given by the City Administration, the term of the contract, the types of firms that could be expected to bid, and the different treatment technologies that might be recommended by the

bidders. The DAERP provided written replies to those parties requesting special clarification of any aspect of the project.

The Request for Proposals (Edital), hereafter, RFP, was made available in late October, 1994. A commission was established to review the bids. The commission was composed of technically qualified people representing the City, the interested State agencies (sanitation and environment), and experts from Universities and professional associations. No community group representatives were members as it was expected that the discussions would be largely technical.

A third public meeting was held, however, to review the contents of the RFP, allowing for discussion in open forum of any remaining concerns. Interested bidders took part in this meeting. A public meeting was held in February, 1995 to announce the bidders and begin the bid review process, and the final public meeting was held in May, 1995 to announce the winning bid. The contract was signed in June, 1995.

Because there were few models to follow, and no national guidelines, many analysts consider that the RFP was excessively long. Corrections were required, causing some confusion. In the end, the City received five serious bids from the 50 requests for the document. Of these five, four were joint ventures between Brazilian and foreign firms. Two bids made it to the final negotiations, and the winning bid was submitted by RECK, a Brazilian firm in a joint venture with the American firm, CH2MHill. It is interesting to note that the RECK group have the contract for solid waste collection and operation of the sanitary landfill, where the treatment plant sludge will be deposited.

3.3 Pricing and Financing Issues

The contract calls for construction and operation for 20 years of three wastewater treatment stations, 23 kilometers of interceptors, treatment of 100% of the City's wastewater production, no reliance on Municipal Government funding and collection of tariffs according to the volume of water treated. The base rate, the low bid, was

R\$0.183 per cubic meter, though by contract time this had been adjusted up to R\$0.248 per cubic meter.

The basic financing, not yet completely contracted, will come from the BNDES (65% of the total, around R\$19.5 million), the Global Environment Fund (R\$9 million) and the joint venture partners. Operations were to begin by the second semester of 1997, and earth movement is now underway.

The BNDES financing, when negotiations are completed, will carry a rate of 17% per annum, and a term of 10 years. Amortization will begin after a grace period of six months from the start of operations. The BNDES rate is calculated from the Bank's base long term loan rate of 11% plus 6%, the highest additional rate applied by the Bank. The base rate, known as the Taxa de Juros de Longo Prazo (TJLP), will be reduced as of 1 December to 11% from its current level of 14.97%.

Once again, the newness of the wastewater concession process has been a factor, causing delays in contracting financing. The guarantees required for the bridge financing and for debt servicing are being worked out on a case-by-case basis. During the construction phase, the Bank looks for the guaranty of the contractor's bank, or to a bond put up by the contractor's owners in the case where a financially strong business group is involved. During operation, the BNDES will require creation of a trustee arrangement with another bank with accounts for deposit of the contractor's receipts from the wastewater charge collections and a reserve account to hold a to-be-determined sum representing amortization payments.

In addition, the City will be required to

- inform the BNDES of any change in the concession relationship;
- pay an indemnity in the event the concession is terminated short of full amortization of the loan; and
- in the event of termination, continue to deposit the receipts related to the operation into the trustee bank accounts.

The DAERP has set the wastewater charges that will increase water bills about 30%. Unlike the water supply and wastewater collection charges, however, upon collection they will be deposited directly to the trustee bank accounts mentioned above.

In order to introduce the new rates gradually, the DAERP will charge initially on the basis of an average of water use in prior months. The DAERP will launch the new charges with a wide-reaching publicity and educational campaign. They estimate that a user with a volume of 30 cubic meters per month will pay a total of about R\$18.00.

3.4 Future Public Participation

To ensure continued public review of wastewater treatment operations, the City established, by amendment of City Statutes, a monitoring entity titled the Câmara de Fiscalização. This committee is empowered

- to monitor each step of construction and operations;
- to provide advice on tariff adjustment and municipal policy regarding sanitation;
- to monitor allocation of the municipal budget to sanitation-related programs and projects;
- to participate in formulation of a Municipal Sanitation Plan; and
- to respond to any request for advice on sanitation policy.

The committee membership will include representatives of the:

- DAERP;
- City Office of Administration;
- City Housing Company;
- national and local Bar Associations;
- Medical Center of Ribeirão Preto;
- Association of Engineers of Ribeirão Preto;
- Association of Architects of Ribeirão Preto;

- Ministério Público;
- employees of the DAERP;
- five different universities;
- Ribeirão Preto Chamber of Commerce; and
- the Ribeirão Preto Workers Union.

The mandate will be for four years, and to further broaden the number of people involved, each committee member will name a substitute.

Public participation has also been institutionalized in the form of the Orçamento Participativo, and in DAERP procedures. The DAERP has also launched an education program in the schools.

Chapter 2

THE CASE OF PIRACICABA

1 Background

Piracicaba is a city of some 300,000 located some 100 kilometers from São Paulo, in São Paulo State. Piracicaba is the last major city on the Piracicaba river whose passage through the middle of the city is marked by an important waterfall. After leaving the Piracicaba region, the river feeds into the Tietê, another major river in the State, and part of the feeder system of the Paraná which reaches the Atlantic at the River Plate between Uruguay and Argentina.

The river is an important feature of life in Piracicaba, and as a result, water and water-related issues are important in the local political debate. In fact, the most effective improvements in the quality of the water passing through Piracicaba will take place upstream, principally in the City of Campinas.

These and other cities are members of the Watershed Committee for the Piracicaba, Capivari and Jundiaí Rivers (Comitê das Bacias Hidrográficas dos Rios Piracicaba, Capivari e Jundiaí) a pioneering effort to improve environmental conditions.

1.1 1989 – No Cash

Water supply and wastewater collection are the responsibility of the Serviço Municipal de Água e Esgotos – SEMAE, a department of the city government that operates autonomously today, collecting and allocating its own resources.

The city government that took power following the 1988 elections found the Department nearly bankrupt, relying on handouts from the annual budget to survive. To correct the situation, the SEMAE was instructed to develop a plan and to increase the rates charged for its services.

1.2 Tariff Revision and Pricing Policy

Modernizing the tariff schedule implied introduction of an escalating rate, based on volume, and on differentiation between types of users. The first step applied to users of up to 10 cubic meters per month, a level designed to keep the service affordable to low income families. More recent SEMAE experience suggests that the majority of residential users consume between 10 and 30 cubic meters per month. Eighty-five percent of the SEMAE's receipts today come from residential users. The low rate today is R\$2.90 for 10 cubic meters of consumption, a level R\$1.00 below the average of 27 municipalities analyzed by the Araraquara Water Department (see Table 1, Chapter 1).

To win approval of the rate changes, and to pave the way for more rate-setting flexibility in the future, the City proposed an adjustment to City statutes, a Lei de Escalonamento. The SEMAE ran public meetings and created an education program to assure public and City Council support. Passage of the Law also gave the President of SEMAE authority to pass on increases resulting from inflation.

Wastewater collection tariffs were originally set at 50% of the water bill for residential users, 80% for commercial users and 100% for industrial users. In 1995, the SEMAE proposed an amendment to City statutes that raised these levels to 100% for all users. This amendment passed without extensive public debate, and its easy passage is considered by SEMAE management evidence of the improvement in services, and in the image of the Department.

1.3 The Financial Condition of SEMAE, and Service Levels in 1995

Today, the SEMAE is financially healthy and has been able to extend water supply to 100% of the City's households and to reach nearly the same level (99%) with wastewater collection. Wastewater treatment, however, reaches about 8% of the potential need. This treatment is carried out by some 40 small plants, largely because the State Environmental Protection Agency, CETESB, has required certain developers and industries to set up plants as part of the licensing process.

1.4 The Plano Diretor

The City has a Master Plan. It is not complete, however, and the Planning Department is understaffed. As a result, most developments are reviewed on an ad hoc basis. The SEMAE, therefore, proceeded to develop, independently, its own estimates of need and investment in its own Plano Diretor. The deadline for complete wastewater treatment has been set for 2003, a date that complies with State objectives as well as those of the Watershed Committee. In fact, the State was required by the Federal Government to set an earlier date than expected.

2 Treatment Station Program

The Plano Diretor projects a need for five, and possibly six mid-sized treatment plants (serving 60,000 to 90,000 people) and one large plant serving the central city area. The Plan indicates an investment of some R\$5 million per year to reach those objectives.

2.1 The First Mid-Sized Plant

The SEMAE has chosen to begin constructing the mid-sized plants using its own funds. It has already contracted for construction and operation of one of these plants

2.1.1 Licitação not Concessão

Because of its active participation in the deliberations of the Watershed Committee (the Mayor is currently President, a State Water Department official with an office in Piracicaba is the Executive Director, and a senior SEMAE official represents one of the professional associations on the Committee), SEMAE is up-to-date with developments in the private-sector-concession process. In fact, the confusion that presently reigns in Limeira, where one of the first concessions to private sector firms was contracted, has given this process a negative image.

The SEMAE has, therefore, decided that it can bank its first plant, a R\$6.5 million project, itself (roughly R\$1 million a year), and will contract out construction and operation of the plant (licitação). Piracicaba is not in a position to take on additional debt, and the SEMAE also expects to spend less time contracting construction than it would if it went for outside financing. The plant's cost will be lower than expected because of a donation of the site by one of the local universities.

2.1.2 Technical Considerations and Contract Terms

The SEMAE did consider it important to obligate the contractor to operate the plant for some time (three years) after construction. The principal reason for this requirement was use of untried technology. The plant will use a combination of technology, a system developed in Brazil called Reator Aneróbio de Fluxo Acendente – RAFA, which combines anerobic and settling ponds and saves on operating costs. The system is new, therefore, the City's caution

Five proposals were submitted following publication of the RFP, and three firms made the short list. A firm from Belo Horizonte won the contract. The City will provide the financing, own the plant, and collect the wastewater treatment fees. During the three-year operating period, SEMAE will pay a fixed amount to the contractor per month. The amount can be adjusted according to normal procedures applied to contracts in Brazil. SEMAE is responsible for all monitoring of the construction and operations, and the State's Environmental Agency (Compania de Tecnologia de Saneamento Ambiental – CETESB) will establish the criteria for effluent quality.

2.2 Public Participation

In contracting the construction and operation of the new treatment plant, the SEMAE did not need to solicit any unusual public support. There was no concession of public service or control. Thus there were no employment-related fears. As in Ribeirão Preto, wastewater treatment is a new service, in the end generating new employment in the region.

The SEMAE was able to argue the case for increasing wastewater collection rates to produce new revenues in part due to the image of effective response that the SEMAE has created since its turn-around in 1989. Acceptance of the increases is also due, in some degree, to the City's general awareness of its position in the Piracicaba watershed. Though better wastewater treatment in Piracicaba will have less impact on the City's own environment than actions taken upstream, active participation of civic organizations in the deliberations and the decisions of the Committee helps to raise public consciousness of the importance of wastewater treatment.

2.3 Future Treatment Plants

The SEMAE will be moving ahead rapidly with plans for the remaining plants identified in its Plan. No decision has been taken to use the private-sector-concession process, however, a draft amendment to City statutes to allow such an approach has been drawn up and is circulating for review. SEMAE officials are not convinced that concession is the route to take. They recognize, however, that the large treatment plant serving the center of the city will cost more, and will require more innovative financing.

There is no evidence that, in Piracicaba, the "private-public" debate with respect to municipal services has been fully aired, or decided. The new administration that takes over in January will face that challenge.

Chapter 3

THE CASE OF ARARAQUARA

1 Background

Araraquara is a city of some 170,000 located in an agriculturally rich section of the State of São Paulo, some 270 kilometers from the city of São Paulo. The principal crops in the region are sugarcane and oranges. Per capita income of \$5,000 is above the average for the State. The City has a strong industrial base related to the region's agriculture and related services. The City gives off an image of prosperity and actively markets itself as a prime industrial location.

1.1 The Departamento Autônomo de Água e Esgotos – DAAE

The DAAE is unusual in that it has had a stable political history and is run presently by a senior management that has been with the Department since its formation over 20 years ago.

Department finances are healthy, with monthly receipts averaging over R\$1.0 million. Some 35% of this is available for new investment, with 30% going to salaries and the remainder to system maintenance.

1.2 Water Service Statistics

Araraquara's principal water supply comes 50% from artesian wells, and 50% from local rivers. Water supply reaches 100% of potential users, and wastewater

collection reaches all but those residences on land large enough to allow for septic tanks. The only wastewater treatment is provided by the major industrial users that have their own facilities.

1.3 The Conselho Administrativo

Because of its long history of financial and operational stability, the DAAE feels that it is sensitive to public concern, and that through its normal contacts and communications is able to maintain public support. The Department's Conselho Administrativo provides the most regular contact with the City's formal civic organizations.

This council, established in 1973 by Municipal law, has a consultative mission. For many years, however, the Director of the DAAE has accepted as binding the Council's recommendations on proposed policy and program change, or change in operating practices.

Council members include the DAAE Director and representatives of:

- the Mayor's office;
- the City Council;
- the municipal Health Service;
- the Chamber of Commerce;
- Araraquara's Association of Engineers;
- the UNESP's Dentistry School and Chemistry Faculty;
- the Araraquara Medical Association;
- Araraquara's Pharmaceutical Association; and
- the Companhia de Tecnologia de Saneamento Ambiental – CETESB, the State's environmental watchdog.

The Health Service is in daily contact with the DAAE because it is responsible for water quality, and because one of Araraquara's intractable problems has been

Dengue fever. Health Service personnel inspect regularly for standing water and, therefore, are able to advise the DAAE of any leaks or blockages in the network.

1.4 Participation in the Watershed Committee

Araraquara is also a member of the Comitê da Bacia Hidrográfica do Tietê-Jacaré. This watershed committee, as in the case of the Piracicaba committee, is charged with encouraging improved use and management of water resources, with environmental improvement an immediate goal. The Committee was formed in 1995, so it has not the track record of the pioneering Piracicaba committee. Furthermore, Araraquara is at the top of the watershed, and so doesn't feel the impact of upstream pollution.

Nevertheless, the Committee promises to keep its 32 member municipalities focused on wastewater treatment, and, because of the active participation of civic organizations on the Committee, to keep the public aware of what is going on.

2 Pricing and Tariff Policy

2.1 Historical Overview

Table 1 Annex 1 reflects Araraquara's own analysis of pricing in São Paulo State. The rate the DAAE is charging for 10 cubic meters of consumption is R\$4.50, a rate that in management's opinion, allows low income households to participate without sacrifice. Araraquara does not have any slum neighborhoods on its fringes, as is so often the case. Its slightly higher charges are compensated for by slightly lower average consumption (closer to 20 cubic meters than 30).

The table also shows that Araraquara sets its tariffs based on volume and type of user. The DAAE has been able to adjust rates as necessary over the years. The latest adjustment came in June, 1996. The previous adjustment (excluding the adjustments tied to Brazil's indexing practises prior to the Plan Real) was in 1987.

Wastewater charges are 80% of the water bill, and the 1996 increases are designed to provide a margin for investment in wastewater treatment. The Conselho de Administração, however, has already approved any rate increases that might be found necessary as construction of the new wastewater treatment facility goes forward.

2.2 Financial Condition

Information in Annex 2 reflects a DAAE analysis of its monthly billings and receipts. Residential accounts make up the majority of each category. The principal difference in the case of the months in question results from non-payment by the City itself. This problem is chronic for all the water departments contacted for this report.

All the same, the DAAE is financially sound. They expect receipts of some R\$15.3 million in 1996 with expenses of some R\$13.7 million.

3 Future Plans and Programs

In planning for its future needs, including wastewater treatment, the DAAE is projecting a population of over 230,000 by the year 2006. They expect wastewater flows of some 818 liters per second (the middle projection) and a pollution charge of 14682 kilograms of DBO5 per day. At present, the Department's investment program is directed at construction of a wastewater treatment plant, and the addition of two new wells to improve the distribution of water supply in the urban area.

The DAAE is also concerned with the quality of treatment provided by its largest industrial wastewater producer, the fruit juice packager Cutrale. Operation of the Cutrale treatment plant, which dumps into the same river to be used by the DAAE's new plant, is monitored by CETESB, but, in DAAE opinion, does not always work to a high enough standard.

3.1 Technical Issues

Wastewater treatment is at the top of the list of DAAE priorities. They have located a site for a plant that would provide nearly 100% of the coverage they need, and are now completing the necessary interceptors. In a study of the treatment options, DAAE consultants estimated that:

- a plant based on aerating ponds would cost a total of R\$19.4 million to build and operate for 20 years;
- a plant using the activated sludge process would cost R\$33 million for the same period; and
- a plant using the combination of technology mentioned earlier (RAFA) would cost some R\$26.3 million.

As with the other cities, the DAAE management are concerned about getting workable technology from the contractor, and understand the reasons for tying construction to operation. They note also that the size of the Araraquara investment is such that it is not likely to attract international firms with long experience in this field. Rather the contractors can be expected to be Brazilian firms with less of a track record.

3.2 Public vs Private Sector

DAAE management will not use a concession to obtain their new treatment facility, as they feel that they can get by with their own resources. They are not, however,

reluctant to use the private sector to provide services. To date the DAAE has contracted with private sector concerns for work requiring heavy machinery (laying pipe, etc.). This approach has worked well, and DAAE is proud that its staff and labor force are relatively small.

They note, however, that efforts to use private enterprise to read meters were not successful. They prefer that contact with the user be made by DAAE employees trained to leave a positive impression, and to be sensitive to problems.

They are not convinced that there is anything to be gained by making the DAAE an independant company, a move that might allow for direct access to capital markets at some future date. They defer to the politicians on the issue, and they doubt that they could develop a satisfactory return on investment for any private shareholders. Their objective is to increase the quality of service without increasing the tariff charged.

There is no evidence in Araraquara that the political groups have even the slightest inclination of providing more autonomy for the DAAE, even creating a public company. The Department already operates independantly of City Hall, and the prevailing image is one of competence and good service. Water and wastewater services are not on the political agenda in Araraquara.

Chapter 4

EVOLUTION OF COMMUNITY PARTICIPATION IN RECENT YEARS

1 Background

The foundation for community participation in municipal government is a response to support for the concept of controle social, implying not only the public's right to know about the plans and programs developed by municipal government, but, more importantly, the right to have a determining or deciding role in the process.

1.1 Law 7.347/85 and the Constitution of 1988

The 1985 Law was designed to encourage action by the public (ação popular) in the case of environmental damage. The Constitution of 1988 has a number of articles that recognize, and call for codification into law:

- participation by representative associations in the municipal planning process;
- development of laws by popular initiative for matters relating to municipal activity;
- participation of community representatives in the formulation of budgets;
- the citizen's right to information about public decision-making;
- the citizen's right to petition for redress in the event of illegal or abusive use of power; and
- the consumer's right to adequate and safe service.

1.2 The PLANASA

Criticism of the PLANASA, formulated in the 1970's, had been growing for some time by the late 1980's. It was clear that the model applied, Water and Sewer Companies chartered by the States which supplied services on the basis of a concession granted by the municipal governments, was not providing an adequate level of service.

In fact, there was a growing suspicion that those municipalities that had not conceded the task to the State companies (a minority) were better off than those that had. The key factor seems to be the independent municipality's flexibility in choosing the means and the price to deliver the necessary service.

2 PMSS – Projeto de Modernização do Setor de Saneamento

The problems with the PLANASA, led the Federal Government to develop, in 1991, with World Bank and PNUD support, a new project. Its policy objectives include:

- autonomy for service providers, and government intervention as a regulator only;
- more flexible institutions;
- financial autonomy;
- application of business methodology;
- private sector participation;
- decentralization of the role of the State; and
- use of an integrated approach.

The means to achieve these objectives include:

- application of realistic usage rates (tarifa realista) allowing full recovery of outlays;
- subsidization of those unable to pay for service;
- use of private enterprise in the financing and operation of services.

3 IBAM's Examples of Transparency and Participation

3.1 Conselho Comunitário de Saúde de Nova Iguaçu, Rio de Janeiro State

This Council was established in 1986 and drew on the experiences of a federation of neighborhood associations that had become increasingly vocal and demonstrative in the face of poor service from the existing health clinic system. The Council's first contribution helped determine the location of new installations, and then guided selection of an NGO to administer the complete network of facilities.

The Council also has representatives on the Conselho Municipal de Saúde, an organization required by the national health program.

3.2 Orçamento Participativo, Porto Alegre, Rio Grande do Sul State

Begun in 1989, this now famous example of broadly based citizen participation has been able to open the budget deliberation relating to capital investments to some 20000 people from 572 organizations. The coordinating body, a Conselho Municipal do Plano de Governo e Orçamento is formed of delegates elected to represent different areas of the city. The Council establishes the investment priorities and tracks progress. A further group of delegates are elected to monitor project activity,

and to stimulate discussion at the community level. This group is called the Consultative Forum, Fórum Consultivo do Orçamento Participativo.

In the early years, sanitation was selected as the priority for municipal investment, in contravention of the Municipal Government's previous selection of public transport. By 1994, sanitation projects had resolved many of the most urgent problems, and the priority became regulating land title.

3.3 Conselho Municipal de Saúde de Nova Friburgo, Rio de Janeiro State

This Council, required by law and of a type that is common throughout Brazil's health delivery system, has decision-making powers, and can set standards and provide information about the functioning of the system. The Council consists of five representatives of the municipal government, two representing the organizations that administer the service (public or private), four health care professionals linked to the national system, one municipal legislator and twelve representatives of the "client" group, either community organizations, unions or groups of handicapped persons.

The flow of information in the system was identified as the best way to improve both the service itself and the control of the service. This led to installation of a management information system called Sistema Gerencial de Informação – SIIS. The system uses two procedures: 1) an appointment process allowing users to schedule appointments in advance, over the phone or in person, and 2) a visit report that creates an up-to-date file on the user that is available at any delivery point in the system.

While this system provides the administrators, the Council and the Municipality with more effective information on usage, its principal benefit has been a social one: the health delivery process has become user oriented with clinics and hospitals having much better information about what demands will be made on any given day. Their "clients" are being recognized individually, and not as numbers on a waiting list.

3.4 Comitê Gravatai, Rio Grande do Sul State

This committee was established to guide the state authorities in the improvement of water conditions in Gravatai watershed, an area involving eight municipalities. The Committee's primary objective is to agree to the priority for use of the available water. Water users account for 40% of the Committee membership, another 40% come from the formal civic organizations of the region and 20% are from public authorities.

The Committee has an official role in the operation of the Water Resource System for the State. It's mandate includes approval and monitoring of the watershed resource plan as well as approval of the fees to be charged for water use. It is required to coordinate the programs of the various public and private sector agents to assure compliance with State water resource policy.

3.5 Sistema Integrado de Saneamento Rural – SISAR, Ceará State

SISAR is a federation of community associations that is responsible for managing water and sewer services, for guarantying access to those services and for assuring their financing on a sustainable basis. The program began in 1991 with support from the State and Germany's KWF. The Board of Directors of SISAR includes representatives from the 35 communities involved, a representative of the State Water and Sewer Treatment Company, the KWF and the 20 municipal governments that are beneficiaries of the program.

One of SISAR's primary tasks was to establish a rate policy that covered the real costs of the service provided. Charges have been imposed gradually as a metering system was installed. Provisional fees of R\$2.50 per household and R\$4.00 for businesses have been set. Some communities have already begun absorbing the cost of the fees for those families not able to pay.

By managing the water and sewer service, the SISAR has put the user in the driver's seat, while at the same time allowing the State's water company to focus resources on extension of the network to new areas.

3.6 Projeto PRORENDA Urbano, Porto Alegre, Rio Grande do Sul State

PRORENDA is designed to bring community and neighborhood associations in the City's informal neighborhoods directly into the planning and capital investment programming process. The management structure is composed of a Comitê de Desenvolvimento representing all the community associations in the region, a Fórum Comunitário, with representatives from each of the community organizations and the Development Committees, a Colegiado, which is a more selective grouping of community representatives and interested public and private organizations, and a Fundo Comunitário.

These groupings elaborate an Urban Development Plan concerned with infrastructure and land title. The plan preparation process begins at the neighborhood level and ends with approval by municipal legislatures. It is accompanied by a Social Development Plan (Plano de Desenvolvimento Social) which identifies projects for funding by the Community Fund. As special objective of the PRORENDA project is training neighborhood groups to plan and identify priorities for investment.

3.7 Comitê das Bacias Hidrográficas dos Rios Piracicaba, Capivari e Jundiá – CPH-PCJ, São Paulo State

The Committee is the culmination of pioneering effort to control environmental conditions in a watershed, a process that developed momentum in the 1980's, and was formalized by the State of São Paulo's Water Resources Law, number 7.663 of 1991. The Law provided that watershed committees would have decision-making

powers in addition to an advisory role, and could initiate programs. The Committee was the first to be established (1993).

After some deliberation, it was decided that the executive body for the Committee would be composed of 48 members, 16 of which would be mayors voting in representation of the 57 municipalities involved, 16 of whom would represent State Government organizations, and 16 of whom would represent civic associations.

The 16 municipalities are chosen by a vote of the whole group, as are the 16 representatives of civic associations. Some 50 civic associations representing a wide range of activities (neighborhood associations, unions, professional associations, Lion's and Rotary Clubs etc.) campaigned for election to the Committee for the two year term. With both the municipal governments and the civic associations active participants in the work of the Committee, a high degree of "controle social" is assured.

By the end of June, 1996, 16 watershed committees had been created in the State of São Paulo. The objectives of the committee for the Piracicaba watershed include:

- to promote a decentralized, participatory and integrated management of the area's water resources, with emphasis on quantitative and qualitative considerations;
- to recognize water resources as a public asset, with an economic value, for which users should pay;
- to combat and prevent pollution, erosion and flooding;
- to manage the water resources in a way compatible with regional development and environmental protection;
- to promote the use of the available resources (surface or subterranean), giving priority to adequate water supply for the inhabitants of the area;
- to optimize the social and economic benefits pertaining to use of the water resources;
- to protect the resources from actions that might compromise their current and future use;

- to provide for an integrated response to the possibility of natural disasters that put public safety at risk;
- to coordinate efforts to promote an efficient use of water and to prevent soil erosion in urban and rural areas;

The Committee has prepared a Plan for the watershed, and has held a series of open meetings (audiência pública) to win its approval. The Committee has also published information about water use and the supply, as well as information about the problems in the area, such as the absence of sewer treatment programs. The Committee has used the resources of the State's Water Resource Fund (FEHIDRO) for a series of relatively small scale projects related to sewer collection and treatment.

1 Different Agents, Different Attitudes

When drawing conclusions about the Ribeirão Preto case, it seems advisable to review the reactions of the different social groupings involved in the concession process. Though Ribeirão Preto may not be an "average" Brazilian city, the reactions of the different components of its society should help to predict reactions elsewhere.

1.1 City Legislators

These elected officials are initially resistant because of a concern that an openly debated concession process will reduce their control over legislation, and diminish their standing as the people's representatives in city government.

1.2 State Organizations and Officials

Because Ribeirão Preto did not concede responsibility for its water supply and wastewater systems to State organizations, as have the majority of Brazil's municipalities, it did not switch from a State water and sewer service provider to a private sector one. In such changes, the officials and employees of the state companies will be naturally resistant to the use of the private sector, fearing for their jobs, if nothing else.

These are uncertain times for the State water and sewer company personnel, because many of Brazil's municipalities are now facing the end of the concession contract period. These cities may now consider changing to different providers. This group's resistance to private sector concessions should be the most pronounced and create the greatest obstacle to increased use of the private sector in basic sanitation.

Other state and national organizations have important roles to play in the basic sanitation field. There are environmental monitoring organizations, with permit-giving powers and there are the new river basin, or watershed committees, to name just two types. In principal, these organizations should not feel special concern for cases where the private sector is brought in. They may reflect the resistance associated with the change from direct government operation to the indirect regulating and monitoring role. This condition is affecting many forms of government activity outside the sanitation area.

1.3 Professional Organizations

In principal, the roles of independent professionals should be enhanced by the more flexible approach to designing and developing basic sanitation facilities. Resistance to use of the private sector will be most obvious in those organizations with a large percentage of government employees among their members.

1.4 Commerce and Industry

Commerce in many of Brazil's cities is not a large water user. They may as a group reflect the popular concern that a traditional public service is being turned over to private enterprise, but it seems unlikely that their resistance will be long-lived.

In the banking community, and in capital markets, there is everything to be gained from more open use of private sector financing for municipal services. In fact, the

present period should be a creative one for the financial sector as new forms of guaranty and market access are developed.

Many industrial concerns have had to treat their own effluent for some time. The major problems for these concerns relate to tougher standards of performance, and the increased interest of State and Municipal governments in integrated basic sanitation systems. Increased cost seems a likely result, and should be the main concern of industry.

1.5 Unions

In recent years unions have been at the center of the debate about the "old" and the "new" left in politics. The concerns of public sector workers have been mentioned above. Unions have, traditionally, supported an active State role in the provision of public services, and may be slow to pick up on the merits of indirect versus direct involvement. They are concerned that they be able to benefit from the use of new technology, via training programs, etc., and their involvement in technology transfer may soften resistance to the switch from public to private sector service providers.

Ribeirão Preto's outgoing City Administration is characterized as representing the "new," more pragmatic and less dogmatic left. This debate between the "old" and "new" Left promises to continue for some time, and could feature importantly in other regions of Brazil.

1.6 Neighborhood Organizations

Processes such as the Orçamento Participativo, and the transparent approach to the concession of wastewater treatment services, have raised the level of participation by neighborhood organizations in the governmental process. In Ribeirão Preto an initial concern that the concession to private sector operators of a public service would mean lower quality and unacceptable costs was overcome by the highly

participative approach. Other communities, such as Limeira, have not allowed such transparency, and the results have caused suspicion. It seems likely that if the transparent approach is not institutionalized, neighborhood reactions will vary widely from city to city.

2 Time and Cost

The process of designing and building wastewater treatment facilities in Ribeirão Preto began in the late 1980's and it not yet complete. The period of time of greatest interest in the decisions to use private enterprise, however, was from 1993 to contract signing in mid-1995.

The timing of events in the Ribeirão Preto case may give an idea of the length of the process, but this should not be considered an average because virtually every step taken was a step for which no model existed.

The active participation of community organizations arguably quickened the process, for it allowed the process's promoters (the City Administration) to capture public approval and, thereby, smooth the track for the necessary legislation and pricing and contracting decisions.

The first public meeting took place in March, 1993 when design concepts were still in draft form. The last took place in May, 1995, when a bid had been accepted. The history of the process suggests that the greatest delays have come from preparation of the contract documents, and negotiating the long term loan conditions. The public participation did not cause any delay.

Some will ask if the participative process carries a heavy cost. Certainly the publicity given the process, with its various meetings and the introduction of new methods of service delivery have a cost. They have not been measured, and are not

considered onerous by a DAERP that has accepted transparency and active community relations as vital to its operations.

3 Sustainability

There can be no question that municipalities will turn increasingly to private enterprise to provide services. The BNDES is now reviewing 16 requests for financing. The question is not about "yes or no" for these municipalities, but rather how to shape the concession. BNDES officials, and others, feel that the national government must pass the regulations that define the impact of the Law on Concessions so that interested municipalities and other public sector organizations can work from a consistent foundation. At present, each project is unique, though information about the existing cases is being passed around. The BNDES has an important role in this regard, as all projects are now being sent there for financing.

Participation in the budget debate, which can pave the way for concessions to private enterprise, is institutionalized. Those City governments who want to use the process, rely on a popular forum, the Fórum do Orçamento Participativo, which a mayor can, but is not required to establish.

4 Unanswered Questions

4.1 The Private vs. Public Debate

Though many municipalities are showing by their interest in the use of private enterprise that they have reached a decision on this subject, they tend to be municipalities in the wealthier areas of the country. Even so, there are different

opinions among these municipalities about extending private sector involvement to the full water supply and wastewater system. Wastewater treatment facilities are located "downstream," that is, out-of-sight, and their performance is of greater interest to those who specialize in overall environmental concern than it is to the average resident of a municipality. Many municipal government's, including the outgoing one in Ribeirão Preto, prefer to retain full control of water supply and wastewater collection operations. This may reflect the fact that in the better cases, they have good assets and a well developed staff that would be reluctant to trade public sector employment for private.

It is also not clear at this time if the public-private debate will continue to be a factor in municipalities outside this southern part of the country.

4.2 Technological Concerns

Three technological concerns appear to be troubling city governments at present:

1. losses in the system (the rough guess is up to 40% even in good systems);
2. street drainage, either because it is getting into the wastewater collection system, or because it represents an environmental peril of its own, and
3. the choice of technology, e.g. settling ponds and activated sludge, anerobic etc.)

The early concessions are going to be important to the resolution of all these concerns, simply because they will allow better measurement of what is being treated and what is being billed, and will provide treatment plant cost and operating experience. With wastewater treatment at 8% nationwide, every new experience will provide valuable insight into the next steps to be taken.

4.3 Financing

Financing for water and sewer networks has come, traditionally, from public sector sources. In the 1960's the regulating legislation tied these services to public housing programs, and established the Sistema Financiero do Saneamento – SFS which provided that resources from the national pension fund, the Fundo de Garantia por Tempo de Serviço – FGTS be administered by the Banco Nacional de Habitação – BNH. The States were called on at this time to create Water and Sewer Funds (Fundos de Água e Esgotos – FAE). Project financing was then apportioned as follows:

BNH (national)	37.5%
FAE(state)	37.5%
Municipal	25.0%.

With the creation of the PLANASA in 1971, this breakdown was changed to a 50-50 split between the BNH and the FAE. The BNH was dissolved in 1986, and the financing function, still using the resources of the FGTS, passed to the Caixa Económica Federal – CEF, a process which remains in force at the present time. The FGTS, however, has needed restructuring, and the CEF is considered very bureaucratic, thereby limiting the use of these resources for wastewater treatment projects.

In recent years the World Bank and the Interamerican Development Bank have provided resources for the sanitation sector. These resources have been directed mainly to support the restructuring of State utility companies.

As yet conditions in Brazil do not appear to support direct project financing via issuance of municipal bonds, or water authority bonds, or some similar mechanism. The outstanding debt of many municipalities would obviate such an approach, but even financially sound municipalities are not yet able to go directly to the capital markets. These markets are among the world's most sophisticated, and they are continually deepening. The recent sales of Brazilian commercial obligations in

foreign markets are evidence of this deepening, and suggest that the markets may develop to the point where municipal governments also can issue obligations in the markets.

The World Bank estimates that some US\$4.7 billion is needed for investment in wastewater treatment. At the present time, however, and in the opinion of the BNDES staff, there are enough resources for wastewater treatment projects to more than satisfy the demand from those municipalities that are able to put together a viable project.

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LIST OF PERSONS INTERVIEWED

RIBEIRÃO PRETO

1. DAERP
Eng^a Isabel Bordini Moreira, Superintendente
Ronaldo Padilha B. de Morães, Assessor Geral
Ailton Carlos Galo, Diretor Comercial e Financeiro

2. CITY HALL
Antônio Palocci Filho, Prefeito
Donizetti, City Council Member
Valério, City Council Member
Planning Department
Dr. Isac Jorge Filho, Secretário Municipal
Arq. Augusto Valiengo Valeri, Director, Depto. Físico-territorial

3. NEIGHBORHOOD ASSOCIATIONS
Federação de Associações de Bairros de Ribeirão Preto – FABARP, Alzira Aparecida
Alves Fischer, President
Antónia

4. UNIONS
Sindicato dos Engenheiros de Ribeirão Preto
Sindicato dos Servidores Públicos de Ribeirão Preto

PIRACICABA

1. Serviço Municipal de Água e Esgoto
Eng^o José Edgard Camolesi, Presidente
Eng^o Hugo Marcos Piffer Leme,

2. Câmara de Vereadores de Piracicaba
Vanderlei Luiz Dionisio, Presidente

3. Prefeitura
Gabriel Ferrato dos Santos, Secretário Municipal de Planejamento
4. Departamento de Águas e Energia Elétrica, Estado de São Paulo, Diretoria da Bacia do Médio Tietê
Eng° Rui Brasil Asis, Director, (also Secretário Executivo do Comitê das Bacias Hidrográficas dos Rios Piracicaba, Capivari e Jundiá)
5. Sindicato dos Engenheiros no Estado de São Paulo (SEESP), Delegacia Regional de Piracicaba
Eng° Walter Antônio Becari, Presidente

ARARAQUARA

1. Depto. Autônomo de Água e Esgoto Araraquara
Eng° Aldo Benedito Pierri, Diretor Geral
2. PREFEITURA
Eng° Roberto Massafera, Prefeito
Secretário Municipal de Planejamento
Assessora da Secretaria Municipal de Saúde

INSTITUTO BRASILEIRO DE ADMINISTRAÇÃO MUNICIPAL

1. Núcleo de Meio Ambiente
Engª Berenice de Souza Cordeiro
2. Núcleo de Desenvolvimento Econômico e Social
Arqª Nidia Rabi

BANCO NACIONAL DE DESENVOLVIMENTO ECONÓMICO E SOCIAL

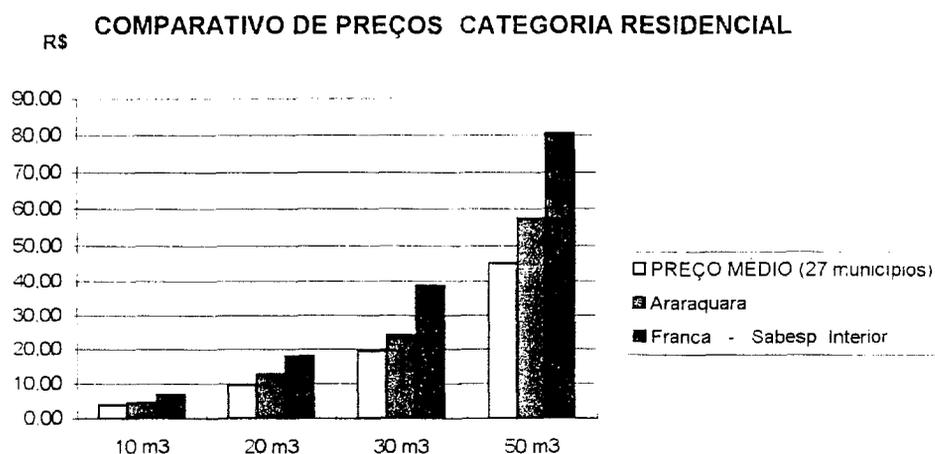
Área de Projetos de Infra-Estrutura

Dra. Terezinha Moreira, Chefe do Departamento de Operações de Saneamento

ANNEX I

DEPARTAMENTO AUTÔNOMO DE AGUA E ESGOTOS
DIVISÃO DE ADMINISTRAÇÃO/DIVISÃO DE FINANÇAS
DEMONSTRATIVO DE PREÇOS DE AGUA ENTRE DIVERSOS MUNICIPIOS
PREÇOS EM VIGOR EM AGOSTO/1996

MUNICIPIO	10 m ³	20 m ³	30 m ³	50 m ³
Americana	3.58	7.74	17,88	41.58
Araçatuba	3.66	8.56	18,10	43,66
Araraquara	4,50	12,60	24,10	57,30
Diferença (média) cl a Sabep (-32,42%)	-33,53%	-29,61%	-37,79%	-28,76%
Araras	3.52	4.42	8,92	17,92
Bariri	2.03	3,68	7,35	15,45
Barretos	3.39	9,15	15,74	32,89
Batatais	6.65	10,78	19,03	35,53
Bauru	2.72	5,92	10,88	28,80
Campinas - Sanasa	5.86	11,78	26,18	54,98
Catanduva	2.70	7,42	14,40	40,50
Diadema	3.80	15,50	37,50	86,90
Franca - Sabesp Interior	6,77	17,90	38,74	80,43
Guaratingueta	4.09	11,99	25,19	51,59
Indaiatuba	4.00	10,00	18,00	39,00
Itu	3.05	3,05	9,72	30,60
Jaboticabal	4.49	10,29	17,59	42,50
Jau	5.00	7,64	12,92	28,92
Jundiaí	2.39	7,86	17,44	47,75
Leme	4.89	11,04	19,89	42,09
Limeira	4.58	12,58	24,03	58,55
Penápolis	4.14	8,27	13,65	25,64
Piracicaba	2.82	10,22	27,12	65,52
Pirassununga	6.08	9,38	20,93	48,20
Ribeirão Preto	2.05	7,90	17,00	51,95
Rio Claro	4.50	13,70	27,40	54,80
São Carlos	3.07	15,85	30,94	68,85
Sorocaba	3.64	9,42	20,64	42,74
Sumaré	5.88	11,18	21,48	50,28
Valinhos	2.70	12,00	24,50	69,50
PREÇO MEDIO (27 municípios)	3,90	9,53	19,42	45,06

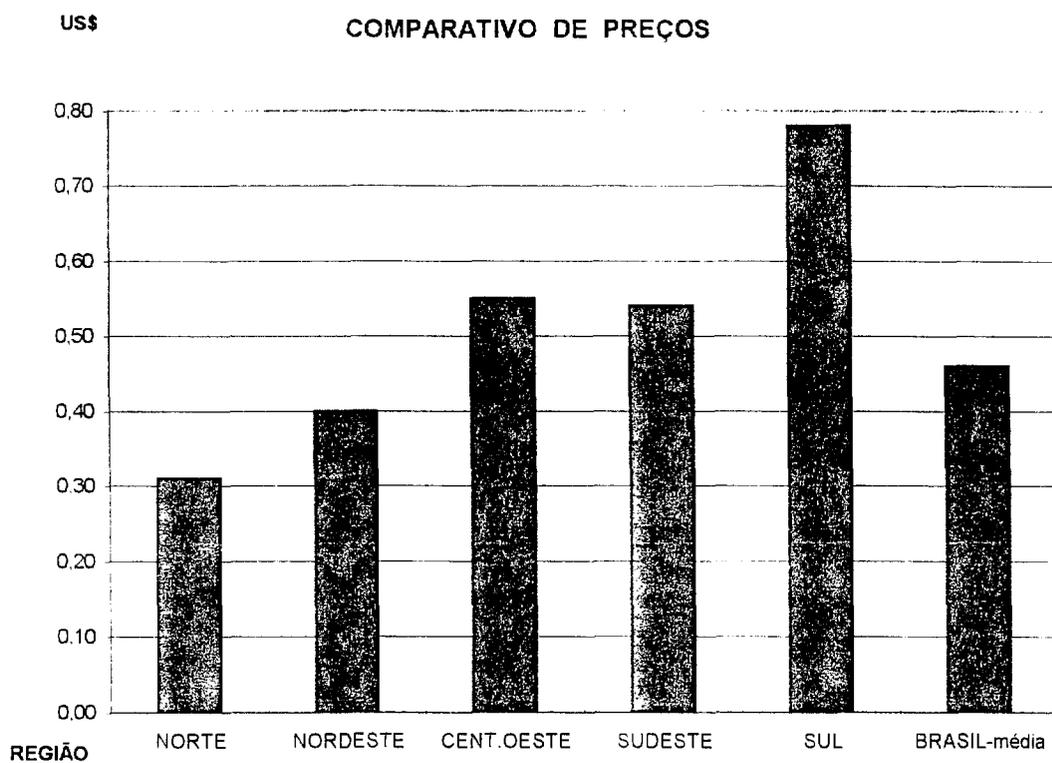


Araraquara, 25 de setembro de 1996

DEPARTAMENTO AUTÔNOMO DE ÁGUA E ESGOTOS
DIVISÃO DE ADMINISTRAÇÃO
DEMONSTRATIVO DA TARIFA MÉDIA DE ÁGUA E ESGOTOS

DISCRIMINAÇÃO	NORTE Vr US\$/m ³	NORDESTE Vr US\$/m ⁴	CENT.OESTE Vr US\$/m ²	SUDESTE Vr US\$/m ⁶	SUL Vr US\$/m ⁷	BRASIL-média Vr US\$/m ⁸
Tarifa média						
Receita operacional/Vol.faturado	0,31	0,40	0,55	0,54	0,78	0,46

Fonte: CABES XVII - 1992/93



Araraquara, 25 de setembro de 1.996

SV

ANNEX II

DEPARTAMENTO AUTÔNOMO DE ÁGUA E ESGOTOS DE ARARAQUARA
DIVISÃO DE ADMINISTRAÇÃO

HISTÓRICO DA EVOLUÇÃO DA SISTEMÁTICA DE COBRANÇA DE
ÁGUA E COLETA DE ESGOTOS

1.969 - Decreto nº 01/69 de 03/07/69 estabelece:

CONSUMO MÍNIMO	-	30m ³
PREÇO ÁGUA/ESGOTO	-	Cr\$ 5,05
EXCESSO POR m ³	-	Cr\$ 0,18

O valor da coleta de esgoto representa 33.33% do valor do consumo de água

1.969 - Decreto nº 03/70 de 02/01/70 estabelece:

CONSUMO MÍNIMO	-	25m ³
PREÇO ÁGUA/ESGOTO	-	Cr\$ 6,96
EXCESSO POR m ³	-	Cr\$ 0,26

O valor da coleta de esgoto representa 30% do valor do consumo de água

1.979 - Ato nº 66/79 de 18/04/79 estabelece:

	Cr\$/m ³	Us\$/m ³
CONSUMO DE 15m ³	- 73,00	7,97
CONSUMO DE 20m ³	- 77,60	8,47
CONSUMO DE 25m ³	- 80,00	8,73
CONSUMO DE 30m ³	- 101,30	11,05
EXCESSO POR m ³	- 5,00	0,55

O valor da coleta de esgoto representa 50% do valor do consumo de água

1.980 - Ato nº 69/79 de 03/12/79 estabelece:

	Cr\$/m ³	Us\$/m ³
CONSUMO ATÉ 15m ³	- 73,00	5,31
CONSUMO DE 16 a 20m ³	- 5,00	0,36
CONSUMO DE 21 a 25m ³	- 5,05	0,37
CONSUMO DE 26 a 30m ³	- 5,30	0,39
CONSUMO DE 31 a 40m ³	- 5,80	0,42
CONSUMO DE 41 a 50m ³	- 6,20	0,45
CONSUMO DE 51 a 75m ³	- 6,85	0,50
CONSUMO DE 76 a 100m ³	- 7,40	0,54
CONSUMO DE 101 a 150m ³	- 8,20	0,60
CONSUMO DE 151 a 300m ³	- 9,00	0,65
ACIMA DE 300m ³	- 9,90	0,72

O valor da coleta de esgoto representa 60% do valor do consumo de água

1.981 - Ato nº 82/81 de 29/05/81 estabelece:

	Cr\$/m ³	Us\$/m ³
CONSUMO ATÉ 15m ³	- 225,00	5,60
CONSUMO DE 16 a 20m ³	- 17,00	0,42
CONSUMO DE 21 a 30m ³	- 19,00	0,47
CONSUMO DE 31 a 50m ³	- 24,00	0,60
CONSUMO DE 51 a 100m ³	- 35,00	0,87
ACIMA DE 100m ³	- 55,00	1,37

O valor da coleta de esgoto representa 60% do valor do consumo de água

1.983 - Ato nº 110/82 de 20/05/83 estabelece:

Nova sistemática de cobrança de preços, extinta a cobrança do consumo mínimo

	Cr\$/m³	Us\$/m³
CONSUMO DE 01 a 20m ³ -	64,00	0,38
CONSUMO DE 21 a 25m ³ -	90,00	0,54
CONSUMO DE 26 a 30m ³ -	101,00	0,60
CONSUMO DE 31 a 40m ³ -	115,00	0,68
CONSUMO DE 41 a 50m ³ -	130,00	0,77
CONSUMO DE 51 a 75m ³ -	160,00	0,95
CONSUMO DE 76 a 100m ³ -	200,00	1,19
CONSUMO DE 101 a 150m ³ -	266,00	1,58
CONSUMO DE 151 a 300m ³ -	330,00	1,96
ACIMA DE 300m ³ -	400,00	2,38

O valor da coleta de esgoto representa 60% do valor do consumo de água

1.987 - Ato nº 150/87 de 30/01/87 estabelece:

	Cz\$	Us\$
CONSUMO DE 01 a 10m ³ -	1,90	0,27
CONSUMO DE 11 a 20m ³ -	2,00	0,28
CONSUMO DE 21 a 30m ³ -	3,00	0,43
CONSUMO DE 31 a 40m ³ -	3,80	0,54
CONSUMO DE 41 a 50m ³ -	4,70	0,67
CONSUMO DE 51 a 100m ³ -	7,30	1,04
ACIMA DE 100m ³ -	13,60	1,93

O valor da coleta de esgoto representa 80% do valor do consumo de água

1.987 - Ato nº 157/87 de 12/05/87 estabelece:

Criou-se uma nova sistemática de cobrança dos preços

Estabeleceu-se a cobrança por Categorias:

Residencial - Comercial/Pública e Industrial

(Considerando a necessidade de melhor distribuir os custos dos serviços do Sistema de Tratamento de Água e Coleta de Esgotos, com tarifas melhor situadas no aspecto sócio-econômico dos consumidores, estabeleceu-se as categorias)

	Resid. Cz\$	Cial/Publ. Cz\$	Indus. Cz\$
CONSUMO DE 01 a 10m ³ -	2,70	3,15	3,35
CONSUMO DE 11 a 20m ³ -	4,80	5,50	5,75
CONSUMO DE 21 a 30m ³ -	7,10	8,20	8,65
CONSUMO DE 31 a 40m ³ -	8,70	10,10	10,65
CONSUMO DE 41 a 50m ³ -	10,35	11,90	12,50
CONSUMO DE 51 a 100m ³ -	11,90	13,70	14,40
ACIMA DE 100m ³ -	14,40	16,50	17,30

O valor da coleta de esgoto representa 80% do valor do consumo de água

	Resid. Us\$	Cial/Publ. Us\$	Indus. Us\$
CONSUMO DE 01 a 10m ³ -	0,19	0,22	0,24
CONSUMO DE 11 a 20m ³ -	0,34	0,39	0,41
CONSUMO DE 21 a 30m ³ -	0,50	0,58	0,61
CONSUMO DE 31 a 40m ³ -	0,62	0,71	0,75
CONSUMO DE 41 a 50m ³ -	0,73	0,84	0,88
CONSUMO DE 51 a 100m ³ -	0,84	0,97	1,02
ACIMA DE 100m ³ -	1,02	1,17	1,22

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Tarifa Atual:

1.996 - Ato nº 213 de 20/06/96

	<u>Resid. R\$</u>	<u>Cial/Publ.R\$</u>	<u>Indus. R\$</u>
CONSUMO DE 01 a 10m ³ -	0,45	1,12	1,33
CONSUMO DE 11 a 20m ³ -	0,81	2,00	2,17
CONSUMO DE 21 a 30m ³ -	1,15	2,94	3,06
CONSUMO DE 31 a 40m ³ -	1,53	3,60	4,16
CONSUMO DE 41 a 50m ³ -	1,79	4,16	4,49
CONSUMO DE 51 a 100m ³ -	2,14	4,89	5,16
ACIMA DE 100m ³ -	2,53	5,81	6,14

O valor da coleta de esgoto representa 80% do valor do consumo de água

	<u>Resid. Us\$</u>	<u>Cial/Publ.Us\$</u>	<u>Indus. Us\$</u>
CONSUMO DE 01 a 10m ³ -	0,45	1,11	1,32
CONSUMO DE 11 a 20m ³ -	0,80	1,99	2,15
CONSUMO DE 21 a 30m ³ -	1,14	2,92	3,04
CONSUMO DE 31 a 40m ³ -	1,52	3,58	4,13
CONSUMO DE 41 a 50m ³ -	1,78	4,13	4,46
CONSUMO DE 51 a 100m ³ -	2,13	4,86	5,12
ACIMA DE 100m ³	2,51	5,77	6,10

DAAE - DEPARTAMENTO AUTÔNOMO DE ÁGUA E ESGOTOS DE ARARAQUARA

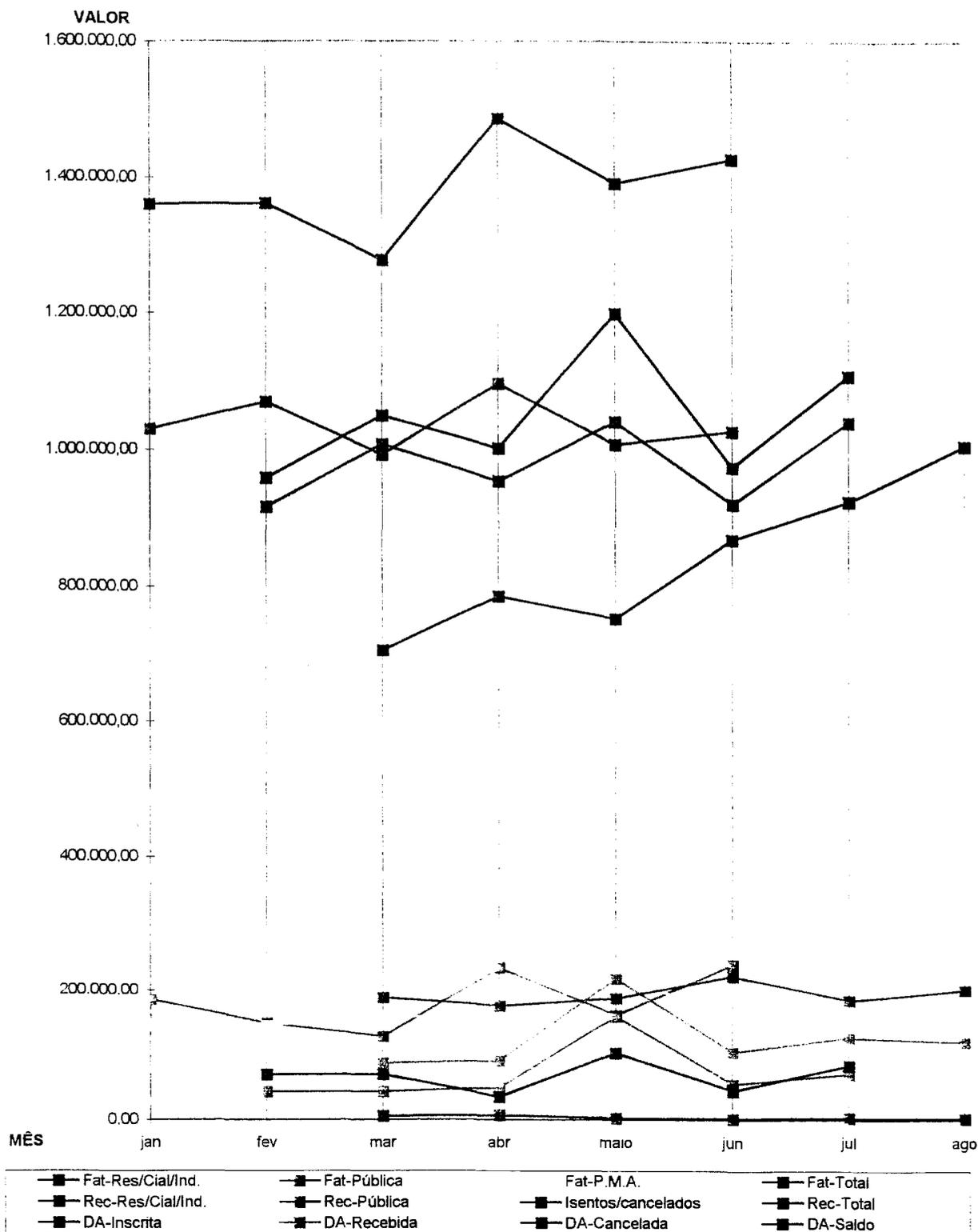
MUDANÇAS NA MOEDA

MÊS/ANO DA MUDANÇA	NOME ANTERIOR	NOVA DENOMINAÇÃO	VIGÊNCIA DA MOEDA ANTERIOR	VALOR PARITÁRIO	(*) COTAÇÃO DO DOLAR US\$	MEBIDA LEGAL DA MOEDA
FEV/86	CRUZEIRO	CRUZADO	Até 27/02/86	Cr\$ 1.000 / Cz\$ 1,00	Cz\$ 13,40	Decreto Lei Nº 2.283, de 27/02/86.
JAN/89	CRUZADO	CRUZADO NOVO	28/02/86 a 15/01/89	Cz\$ 1.000 / NCz\$ 1,00	NCz\$ 1,00	Medida Provisória Nº 32 de 15/01/89 que deu origem a Lei Nº 7.730, de 31/01/89.
MAR/90	CRUZADO NOVO	CRUZEIRO	16/01/89 a 15/03/90	NCz\$ 1,00 / Cr\$ 1,00	Cr\$ 41,00	Medida Provisória Nº 168 de 15/03/90 (alterada pelas M.P. Nº 172, de 17/03/90 e 174 de 23/03/90) que deu origem a Lei Nº 8.024, de 12/04/90.
AGO/93	CRUZEIRO	CRUZEIRO REAL	16/03/90 a 31/07/93	Cr\$ 1.000 / CR\$ 1,00	CR\$ 72,07	Medida Provisória Nº 336 de 28/07/93 que deu origem a Lei Nº 8.697 de 27/08/93 e Resolução BACEN Nº 2.010, de 28/07/93.
JUL/94	CRUZEIRO REAL	REAL	01/08/93 a 30/06/94	CR\$ 2.750 / R\$ 1,00	R\$ 0,94	Leis Nº 8.880, de 27/05/94 e 9.069, de 29/06/95.

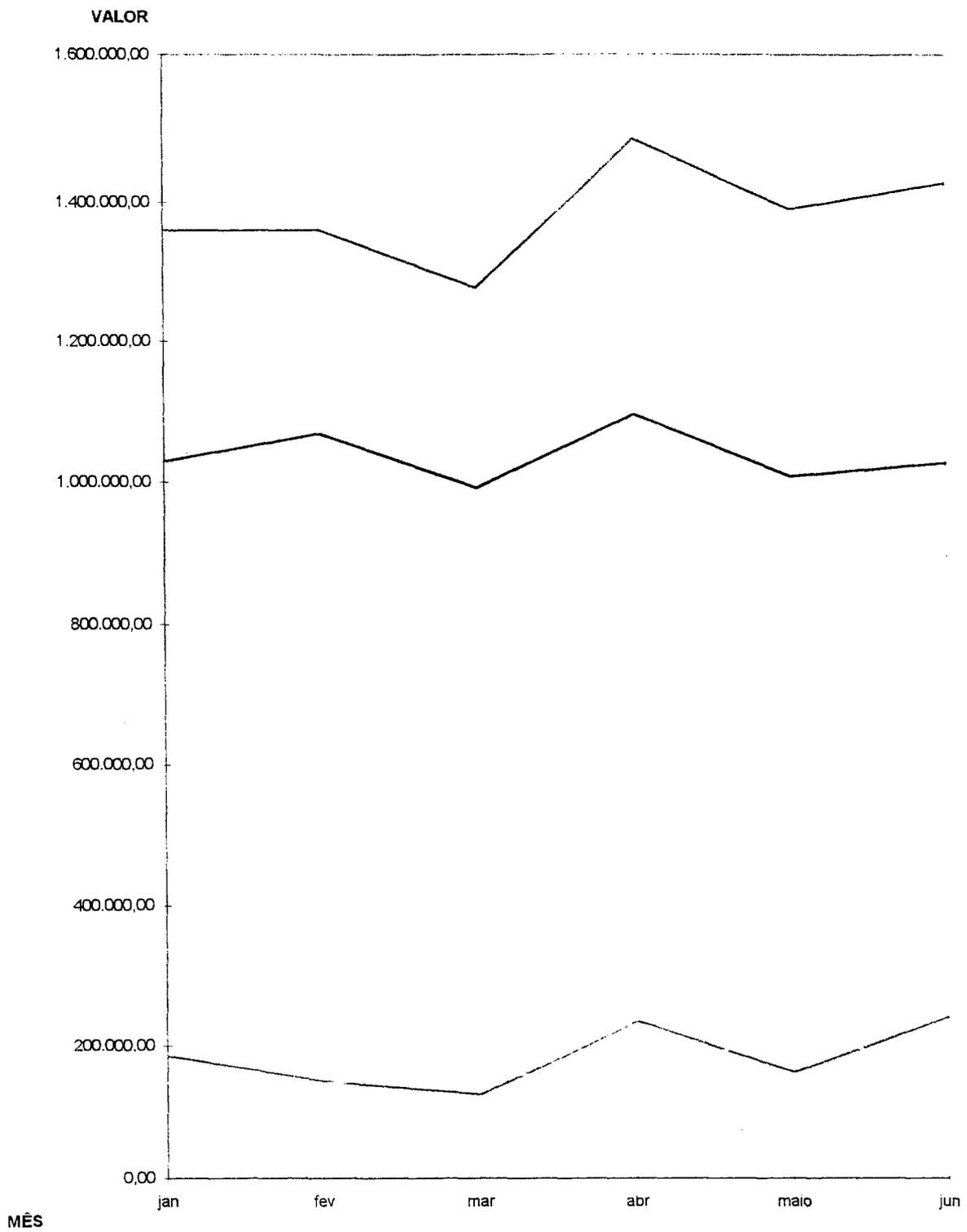
(*) COTAÇÃO DO DOLAR (Us\$): Dolar Comercial para Venda cotado no 1º dia útil da vigência da nova moeda.

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EVOLUÇÃO DO FATURAMENTO/RECEBIMENTO - 1 996



EVOLUÇÃO DO FATURAMENTO - 1996



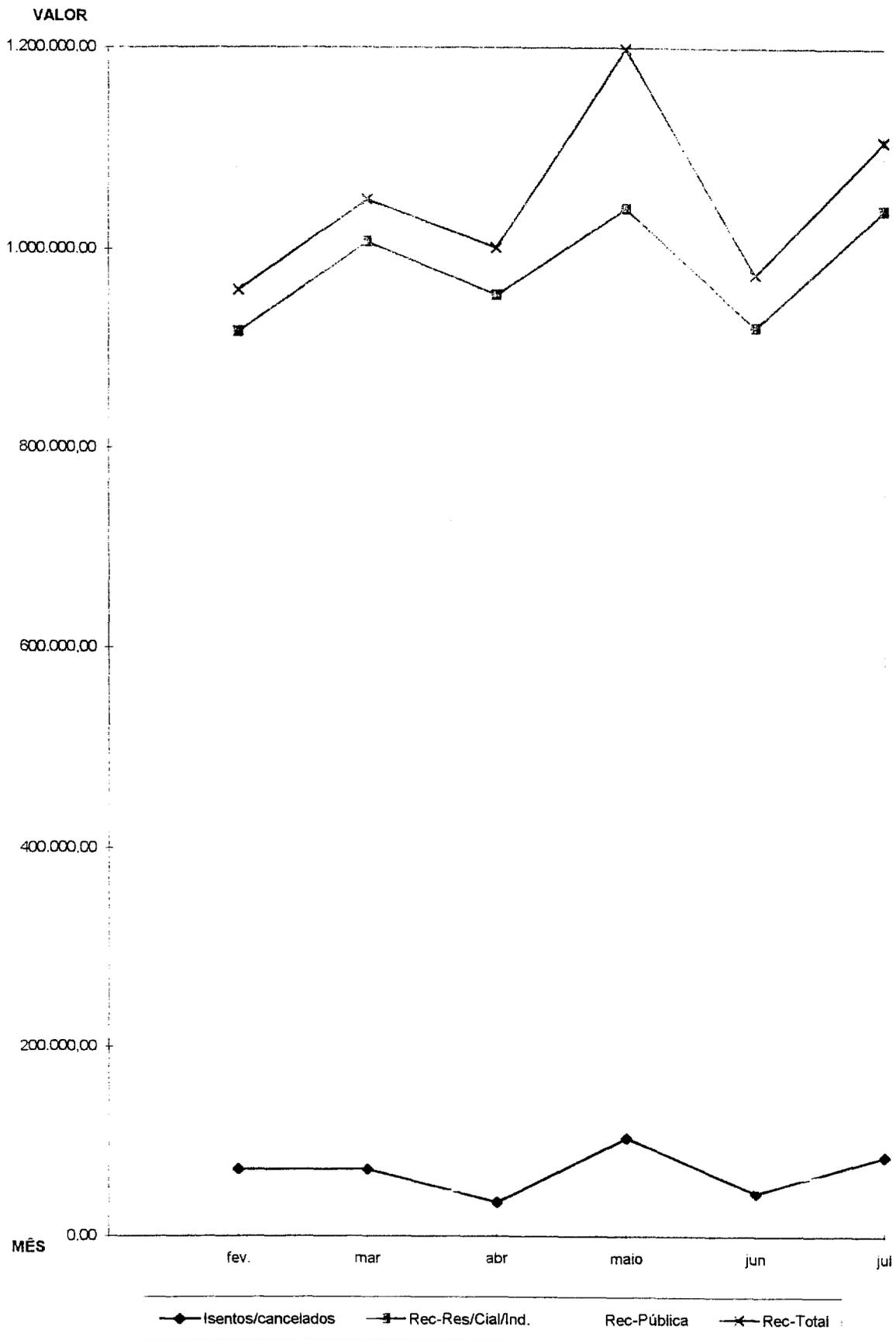
— Fat-Res/Cial/Ind.

— Fat-Pública

— Fat-P.M.A.

— Fat-Total

EVOLUÇÃO DO RECEBIMENTO - 1 996



EVOLUÇÃO DA DÍVIDA ATIVA - 1996

