

## Water and Sanitation Program

An international partnership to help the poor gain sustained access to improved water supply and sanitation services

# Independent Water and Sanitation Providers in Africa

## Abidjan COTE D'IVORIE

### West and Central Africa Region

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Federal German Ministry  
for Economic Cooperation  
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# The importance of private operators in the potable water system

## Non-existent in water production...



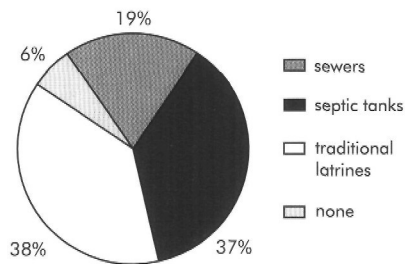
The Ivory Coast Water Distribution Company (SODECI) is a private company with the monopoly for potable water production in Abidjan.

Many families, however, also use lagoon water and abundant rain-water to supplement SODECI water.

## ...but important in water distribution in peri-urban districts

SODECI's distribution network supplies more than 180,000 private customers in Abidjan, less than half of Abidjan's

Population serviced by type of equipment



families (43% in 1997). In fact, SODECI only services built-up areas and its connection procedures are particularly restrictive.

Many families, therefore, use private operators outside of SODECI and obtain water from standpipes (142 in operation) or from private connections (1,500 to 3,000 resellers).

## Turnover difficult to evaluate, but an important number of jobs

Because of high demand, water resale from private connections has developed rapidly, but in most cases outside of

procedures established by SODECI, making evaluation of their number and economic importance difficult. There appear to be 300 authorized resellers for 1,500 to 3,000 clandestine ones and approximately 143 standpipe managers.

# The importance of private operators in the sanitation system

## In construction and maintenance of sanitary facilities mainly in peri-urban areas



Abidjan is one of the rare capitals in this sub-region to have an operational sewer and rain-water system. Managed by SODECI, it is composed of a 756 km wastewater network and a 156 km single network, 43 pumping stations, 12 descending plants, 3 sludge treatment plants and a stabilization plant. Reject is disposed of in the sea.

Families living in urban districts tend to connect to the sewer system. In 1998, out of 175,000 customers connected to the water system, 78,000 (44%) were connected to the sewer system and 34,000 (20%) were connectable to the wastewater system.

In peri-urban areas and non-built-up areas, however, not serviced by the water distribution system, the population turns to independent sanitation.

Highly populated, precarious areas are experiencing a multiplication of public facilities equipped with toilets, showers or urinals.

Only manual cleaners work on traditional latrines used by the poorer



population. Sludge suction trucks service mainly the more affluent sector of the population and the Government with large-sized septic tanks in paved road areas.

SODECI initiated a standpipe program to service precarious districts as cheaply as possible. Due to long waiting lines at the Yacoli standpipe (maximum of 40 customers an hour) at peak periods and the standpipe's irregular service due to its coin slot malfunctioning, many people prefer connected resellers' services rather than those from a standpipe. In addition, the reseller is closer to the customer and is able to fill the recipients on their heads, for example, and knows his neighborhood customers, contrary to the standpipe operator who has been appointed by the municipality and is, therefore, not from the neighborhood.

Operators of public facilities equipped with toilets, showers and urinals, respond to the demand made by inhabitants of precarious districts or those with high density shacks that do not allow families to install septic tanks.

### WATER RESALE FROM A PRIVATE CONNECTION

Water resale occurs in precarious districts as well as in built-up areas, clandestinely or authorized by SODECI.

- In built-up areas a customer, who benefits from a social connection, resells water from a tap in communal square.
- In precarious districts the reseller installs a meter connected to the tap by several 100 meter rubber hoses within the limits of a built-up area. Some resellers own several meters, each one with 1 to 3 faucets.

Authorized resellers make an initial important investment of approximately 460,000 FCFA (service charges, security deposit, material cost). Annual turnover for an authorized reseller with 3 taps is 3,467,500 FCFA and 730,000 fcfa for a clandestine one with 1 tap.

Patrice Any, president and founding member of AREQUAP CI, was an assistant accountant before his dismissal in 1992. He became a standpipe manager and bought a standpipe in 1993 with his savings and paid off 350,000 FCFA of delinquent debts and service charges. His profits allowed him to purchase a second standpipe in 1997, and he also bought a meter equipped with 2 taps for water resale and 2 more in 1999. He sells water at an average of 850 FCFA/m<sup>3</sup> and his average monthly turnover is 2,133,000 FCFA for 2 standpipes and 2,920,000 for 3 meters.

## Offer of services from private operators adapted to the specific demands of the peri-urban population

Potable water operators	Types of services and areas of intervention	Price FCFA/m <sup>3</sup>
<b>Connected resellers</b>	<ul style="list-style-type: none"> <li>• Retail water sale from a private connection linked to SODECI</li> <li>• Good quality potable water supply in varying quantities (15-20 l. buckets, 30-35 l. basins, 200 l. barrel)</li> <li>• Especially near to suburbs</li> </ul>	500 to 1,000 (850 on average)
<b>Standpipe managers</b>	<ul style="list-style-type: none"> <li>• Retail water sale from a standpipe linked to SODECI and equipped with coin slots</li> <li>• Good quality potable water supply in varying quantities (15-20 l. bucket, 30-35 l. basin, 200 l. barrel)</li> <li>• Possibility of paying by installment</li> <li>• In central districts and close to outskirts</li> </ul>	494 (of which 390 given to SODECI)



In spite of its innovative character, the coin-operated Yaocoli standpipe hinders operations (frequent blockages). Its dysfunction causes water leaks and reduces service time that is already limited because of the time needed to fill the reservoir.

SODECI sought to normalize connected resellers' activities by establishing an agreement, but its promotion and diffusion amongst interested parties is still insufficient. Pricing and recognition policies (deposits and connection costs) that they have to abide by, do not indicate a real desire to develop their activities.

Some resellers have, however, formed an Association of Water Resellers in Precarious Areas of Côte d'Ivoire (AREQUAP CI) in the hope of establishing a dialogue between the Government, SODECI and the different on-site participants.

### Some proposals

After the Bamako Conference (September 25 to 29, 1999), representatives from Côte d'Ivoire put forward the following priority items:

- Unique tariff to be negotiated between already existing associations and organizations and the Water Department for resellers authorized by SODECI.
- Make the 5 discharge plants recently constructed for cleaners operational, thus reducing unauthorized dumping and facilitate sludge suction truck rotation.
- Mobilize financial resources to develop the activities of authorized

resellers in precarious districts; establish a strategic plan to encourage financial institutions to finance projects.

### ...with competing water resources

- lagoon polluted by industrial waste
- rain-water (2,800 mm/year)

### A RESELLERS' ASSOCIATION TO MAKE WATER RESALE PROFESSIONAL

The Association of Water Resellers in Precarious Areas of Côte d'Ivoire (AREQUAP CI) was created in 1998 with some 40. authorized resellers negotiating with the Government and SODECI.

Their main demands are: resellers should be billed at a unique tariff of 390 FCFA/m<sup>3</sup> applied to standpipe operators; creation of a fund to finance initial investment; reducing connection procedures; information campaigns to make the Association known.

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The Water and Sanitation Program is an international partnership to help the poor gain sustained access to improved water supply and sanitation services. The Program's main funding partners are the Governments of Australia, Belgium, Canada, Denmark, Germany, Italy, Japan, Luxembourg, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom; the United Nations Development Programme, and The World Bank.

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Sanitation operators	Types of services and areas of intervention	Price in FCFA		
<b>Manual cleaners</b>	<ul style="list-style-type: none"> <li>• Complete cleaning of dry latrines, small pits and wastewater wells, model chosen by poor families</li> <li>• On-site burial of sludge</li> <li>• Negotiable price: credit for a nearby customer</li> <li>• In all inaccessible non-built-up areas</li> </ul>	?		
<b>Sludge suction trucks</b>	<ul style="list-style-type: none"> <li>• Liquid cleaning by spiro truck, large watertight or septic tanks, model chosen by more affluent families and buildings</li> <li>• Sludge removal (cistern 7 m<sup>3</sup>) to discharge sites</li> <li>• Cash payment</li> <li>• In central districts and outskirts accessible by paved roads</li> </ul>	10,000 FCFA/trip		
<b>Public toilet/latrine managers</b>	<ul style="list-style-type: none"> <li>• Provision of public sanitary facilities</li> <li>• Near public places (markets, stations) and in highly populated precarious districts</li> <li>• Varying prices according to district and lifestyle of inhabitants; membership for residents</li> </ul>	Structured district	Precarious district	
		Shower	100	50
		Toilet	50	25
		Urinal	25	15

## In relation to supply from public utilities

### A monopolistic private operator...



The same public operator services Abidjan for water and sanitation. SODECLI is a private company formed in 1960 and awarded public water service concession in 1987. It holds the exclusivity for operations, distribution and sale of water. It is also responsible for the management, maintenance and extension of the sewer system, as well as drains maintenance.

### ...but still a limited offer

SODECLI is not authorized to extend its water adduction in non-built-

## PUBLIC TOILET FACILITY MANAGEMENT, IN RESPONSE TO THE LACK OF AN APPROPRIATE SANITATION SYSTEM

In public areas, but also mainly in high-density precarious districts, more and more individuals are operating public facilities built by the municipality or NGOs. Neighborhood residents use the shower facilities more, whereas passers-by use the toilets and urinals. The facilities usually house 3 to 5 toilets and 1 to 2 showers. Daily income varies between 500 and 1,500 FCFA, according to districts and the facilities' capabilities.

Louis Anouan, entrepreneur, personally invested in the construction and operation of public facilities. After the AGIDE company went bankrupt, for which his company, EGEBECL, had built a sanitary facility, Anouan became a sanitary block operator (3 showers and 13 toilets) in Adjame Mirador in 1988. His annual turnover, after authorization, payment of municipal taxes and the follow-up of his job order by the Ministry of Environment, is approximately 4,320,000 FCFA.



up areas. However, more than 50% of the capital's districts are still not urbanized. For built-up areas, administrative procedures to connect to the system remain restrictive.

- All requests must have land ownership titles and site plans for the area to be connected, thus excluding precarious districts from being serviced by SODECI.

- Attribution of the connection to a plot rather than to a home penalizes households living on the same plot (using the same connection) and tenants (receiving permission from the owner) and leads to problems for bill paying.

- The fact that SODECI sends out 3 monthly bills necessitates important savings and excludes low-income households.

SODECI is launching a social policy in favor of low-income households for water connections (19,000 FCFA social connection, 169,000 FCFA normal connection) even though the billing system remains inappropriate.

Given the development of water resale from private connections, SODECI has implemented an authorized procedure for connected resellers (commercial customers) peculiar to West Africa. Whereas it attempts to stop clandestine resellers, it does nothing to favor authorized resellers except to bill them monthly even though they have high investment costs.

Yacoli standpipes that are supposed to supply poor districts with potable water at the lowest cost have to compete with clandestine resellers and finally have a lesser impact on the market. This equipment, implemented in 1994, supplies 21 liters of water upon introduction of a 10 FCFA coin. The coin slot system contributes to an automatic control of low cost water sale by preventing standpipe operators from changing volumes or prices. They are surpassed by resellers who offer water at the same price, but more services.

In sanitation, only water system customers are able to connect to sewers. The system remains insufficient and

connection is relatively expensive (between 60 and 100,000 FCFA). The price of water includes a sanitation tax that contributes to the national sanitation fund (approximately 1,850,000 FCFA per annum).

## Perspectives of development for independent operators' activities

### Abidjan, a city of almost 3 million inhabitants situated on both sides of the lagoon



The city encountered rapid growth marked by intensive urbanization. The population went from 300,000 inhabitants in 1963 to almost 3 million today.

Abidjan stretches out on both sides of the Ebrié lagoon, over 58,000 hectares, of which less than 85% is on firm ground and more than 15% on lagoon wetlands. Built-up areas represent less than 18%, and more than 50% of the built-up areas comprises precarious housing inhabited by nearly 60% of the city's households.

In 1998, 11.1% of Abidjan's population lived below the urban poverty threshold (157,735 FCFA/year) and 33.6% of total population.

### Restrictions to overcome

High cost of deposits and connection are out of range for the small independent operator, for standpipe management and water resale from a private connection.

#### SODECI'S types of services and areas of intervention

Sale of water in central districts and near-by outskirts:

- By private connection to households, administrations, clandestine resellers: membership, 3-monthly billing, 4-level tariffs
- By private connection to authorized resellers: membership, monthly billing, 4-level tariffs
- By standpipe to operators: monthly billing, 1 tariff

Sanitation service:

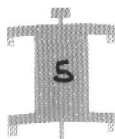
- Wastewater collection through sewers in built-up areas
- Liquid cleaning of pits by sludge suction trucks in paved road areas
- Treatment plant or stabilization before dumping in sea

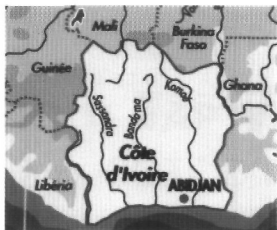
#### Price in FCFA/m<sup>3</sup>

Tariff levels for private connection:

- 184 (0-6 m<sup>3</sup>/month)
- 286 (7-30 m<sup>3</sup>/month)
- 464 (31-100 m<sup>3</sup>/month)
- 532 (>100 m<sup>3</sup>/month)

Tariff unique for standpipe: 390 (with discount: 79 FCFA/m<sup>3</sup> sold)





# RESELLERS OF HOUSEHOLD TAP WATER

Abidjan - CÔTE D'IVOIRE

Abidjan: population 3,000,000 - 1,000 CFAF = US\$ 1.60

## WATER SERVICE IN ABIDJAN

- Less than half of households in Abidjan have a private connection (43 percent in 1997).
- The rest get their water from private distributors: 142 standpipe operators, 300 licensed and 1,500 to 3,000 unlicensed household resellers.

## FROM UNLICENSED TO LICENSED RESELLER

The Côte d'Ivoire Water Distribution Company (SODECI) serves only the planned urban subdivisions and its water connection procedures are especially restrictive.

Demand for water is so high that resale of water from households with a connection is growing:

- in planned subdivisions, where households with a low-income house connection resell water from a tap located in a common courtyard;
- in unplanned settlements, where households at the edges of neighboring planned areas install a meter linked to flexible tubing which carries water to unserved households, up to hundreds of meters away.

To regularize this practice, SODECI established a licensing procedure.

## A PROFITABLE ECONOMIC ACTIVITY

The resellers use the same tap for their own use and to provide water to those in the immediate vicinity. Resale becomes profitable once a reseller can sell water from two taps connected to a meter and reserved exclusively for reselling water:

- initial investment: CFAF 464,000 (CFAF 169,000 for the connections, CFAF 200,000 for the security deposit, CFAF 95,000 for additional materials),
- purchase of water at normal rates: CFAF 464/m<sup>3</sup>, with monthly rather than quarterly billing,
- average resale price: CFAF 850/m<sup>3</sup>.
- average annual sales: CFAF 730,000 for an unlicensed reseller (one tap), CFAF 3,467,500 for a licensed reseller (three taps).

## PROFILE OF A LICENSED WATER RESELLER

The president of the water resellers' association (AREQUAP-CI) is a former assistant bookkeeper who became a water reseller since his dismissal from his previous job.

- Using his savings, he purchased a defunct standpipe in 1993 and paid off over CFAF 350,000 in outstanding water bills and connection charges.
- with the earnings from this first standpipe, he purchased a second one in 1997,
- also in 1997, he purchased a meter with two taps, and then two more in 1999.

He resells the water for CFAF 850/m<sup>3</sup> on average. His average annual sales are CFAF 2,133,000 for water sold from the two standpipes and CFAF 2,920,000 for water sold from the three pairs of metered taps.



Unplanned settlements account for more than half of Abidjan's area. Underserved neighborhoods and dwellings clustered around a common courtyard are home to 70 percent of the city's households.



## AN ASSOCIATION OF WATER RESELLERS

The Association of Water Resellers in Unplanned Urban Areas of Côte d'Ivoire (AREQUAP-CI), created in 1998, brings together about 40 licensed water resellers and enables them to negotiate with SODECI and the municipal authorities. Among the achievements they claim:

- reduction of the water rates paid by licensed resellers to CFAF 390/m<sup>3</sup>, the same as that for standpipes
- creation of a guarantee fund to finance initial installation equipment
- simplification of connection procedures
- information campaigns to publicize the association.