



Ouagadougou and Kumasi sanitation projects : A comparative case study.

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A Comparative Case Study of Ouagadougou and Kumasi Sanitation Projects.

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WATER AND SANITATION PROGRAM
UNDP - WORLD BANK
REGIONAL WATER AND SANITATION GROUP - WEST AFRICA

The objective of this study is to compare and capture lessons from two innovative experience in the field of urban sanitation in West Africa.

It covers the roles played by the respective decision makers, the city authorities, the donors and all key actors and participants in the urban environment.

The document was commissioned by RWSG/WA under the supervision of the manager, Alain Mathys and the excellent collaboration of Annie Manou-Savina within the framework of the UNDP-World Bank Water and Sanitation Program.

Invaluable contribution was also received from the project teams in Ouagadougou and Kumasi during the preparation of this case study.

Note: This is the English translation of the original case study written in French by Mina Saidi-Sharouze.

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Caution :

For the effective illustration of this comparative study, the report is written in a parallel format; pages on the left represent Kumasi and pages on the right for Ouagadougou. Please take note!

Preamble

Developing countries and development institutions face considerable challenges in the water and sanitation sector. Rapid population growth and increased urbanization exerts immense pressure on the physical capacity and lifespan of infrastructure as well as on the natural limits of the ecosystem. National budgets are unable to meet the ensuing demands for the competing investments. The numerous public institutions in the sector also suffer from inefficient management and lack of any stimulating structural arrangements to promote real reforms. A lot of initiatives in the sector fail as a result of their inflexibility, non-participatory nature and not paying enough attention towards the complex aspects of institutional and organizational issues.

The information revolution sweeping across the planet has brought to the fore the need for quality services and participation in the definition of policies in public institutions. For the underprivileged populations in all developing countries, improvement in water and sanitation services is a major priority. To a large extent, citizens expect better access to basic services from the public authorities.

However, despite sustained efforts that have been made in the sector, over 350 million people in Africa do not have access to appropriate sanitation facilities. In the last decade, the rate of population growth and urbanization surpassed that of the provision of sanitation infrastructure with the result that the number of people without access to basic water and sanitation facilities increased by more than 30% in absolute terms.

To confront this enormous challenge, it is necessary to review the approaches that have been used in the past. A lot of lessons have been learnt from successes and failures as well as the reasons for these results. Some ideas and approaches which were otherwise judged as innovative in the past have today become conventional. A lot remains to be learnt but the learning process should be confronted more scientifically. The joint UNDP-World Bank Water and Sanitation Program has, since 1988, contributed to developing new approaches to improve the delivery of basic services. It has also been involved in the implementation of innovative technological options and effective institutional mechanisms that offer levels of service adapted to the resources and demand of users. The UNDP-World Bank Water and Sanitation Program is paying increasing attention to the problems of peri-urban zones, particularly sanitation problems in poor neighborhoods and squatter areas. These activities are being spear-headed in many West African countries.

In Ghana and Ouagadougou, key ideas on strategies for improving urban sanitation have been concretized through pilot projects which were implemented, thanks to the interest and efforts of the respective

governments, the UNDP, the World Bank and other bilateral agencies. These two projects which have just been completed, have totally achieved their set objectives: to test the validity of the strategic proposals and to demonstrate the viability of the new approaches proposed.

The proposed approaches turned out to be perfectly justifiable and sustainable during implementation. Within the period, these projects have generated lessons, which are considered necessary to document and disseminate as widely as possible. Not only because of the similarities in the two projects, but also due to the differences in their social and institutional set ups, we found it interesting to conduct a comparative study on these cases in order to document and draw useful lessons from them.

Both projects have their own accomplishments. In Ouagadougou, substantial financing from different funding agencies (World Bank, Caisse Francaise de Development, UNDP, UNICEF) is underway to undertake projects expected to improve the standard of living of deprived populations, based on recommendations of the Strategic Sanitation Plan for Ouagadougou and from the results of the pilot project. Financial and institutional mechanisms established within the national agency responsible for sanitation have been essential in extending actions to promote sanitation in the whole city, without recourse to external financing.

In Kumasi, arrangements have been put in place by the city, government and the training network center at the university in Kumasi to guarantee the long term management of infrastructure and to ensure replication . A national urban sanitation program for other secondary cities, based on the approach and strategies defined in Kumasi is currently under preparation with the aid of the World Bank .

The success of these two projects show that it is possible to selectively improve the quality of life of underprivileged urban dwellers. A lot of reflections certainly remain to be done in order to redeem the degradation in the quality of life of people and the environment in cities of developing countries. Ouagadougou and Kumasi are following an optimistic path in the right direction.

Alain Mathys.

Regional manager - West Africa

UNDP - World Bank Water and Sanitation Program.

Introduction

One cannot speak of urban restructuring and improvement of standards of living without referring to sanitation and waste management. A sanitation project concerns households, the communities, local authorities, private companies and institutional frameworks. From small refuse dumps to the final disposal site, the stages of control are numerous and the negotiations involved very essential.

Solving sanitation problems does not mean just finding technical solutions. Experiences of the International Water and Sanitation Decade show us the limitations of technical solutions usually linked to objectives centered on expected rate of coverage and the need to seek new modes of management which will ensure the sustainability of actions and strategies put in place. This report presents two sanitation projects at Ouagadougou in Burkina Faso and Kumasi in Ghana, both of which are at the end of their pilot phase. The general purpose of these two projects was to develop a sanitation strategy at the city level, taking into account the specificities and needs of each neighborhood, community and household: a strategic sanitation plan that permits the broad identification of solution and goes on to test these recommendations in a pilot project.

Methodology for preparation of the case study:

A lot of project documents and related activities were consulted. First hand observation of the living conditions, settlement characteristics and the general layout of the two cities,...in depth discussions with the project teams, questioning of the key actors involved (different socio-economic categories of households, resource persons in the neighborhoods, local authorities, artisans and private companies) were carried out on:

- Their participation in the project.
- The difficulties encountered.
- Expectations for the future.

Most interviews were filmed, since according to experience, the use of video recording effectively brings out essential and credible points during an interview. Above all, it contributes to making the people interviewed aware of their responsibilities by their own given testimonies. Slides on the project and the state of sanitation in the two cities have also been produced for educational purposes.

Points to consider in future case studies:

1- Availability of information and objective data:

Not all the data and information on the project were available in accessible form for ready utilization during the study. The author was obliged to generate some primary estimates and conclusions based on direct field survey.

2- Collaboration with local consultants:

For this type of study, collaboration with local consultants could have been indispensable in allowing for the exchange and critical comparison of important ideas. The short duration of the study did not allow the tapping of such a resource.

3- Regular documentation of progress:

It would have been appreciated if all stages of the projects had been documented on video. This would have permitted measurement of progress and would have facilitated the synthesis and systematic documentation of the experiences.

1 - Context

The two projects were all initiated at the end of the International Drinking Water Supply and Sanitation Decade (IDWSSD) and were based on lessons drawn from development projects during the period. One of the lessons learnt was the need to avoid planning on the basis of the number of facilities to be built but rather focus plans on the demands of the people.

Each of the two cities has a population of around 700,000 inhabitants and have all developed so rapidly as against the ability of their respective public authorities to control and provide them with urban services. Kumasi, once dubbed "the garden city" of Ghana, was in a state of deterioration and the state of sanitation in Ouagadougou was fast becoming alarming.

In both cities, 70% of the population did not have access to improved sanitation systems. Wastewater and excreta were disposed without treatment. Certain sections of these two cities, especially the peripheral zones, frequently underwent power cuts and water shortages. Institutions responsible for sanitation lacked autonomous financing and their roles were not clearly defined. At the suburban levels, however, certain actions were initiated.

During the revolutionary era in Ouagadougou, clean-up days were organized by revolutionary committees and women's groups. These movements, which nearly disappeared following the change of government, have been replaced by numerous environmental protection associations.

In Kumasi, the committees for the defense of the revolution (CDR) and unit committees of the assembly assumed responsibility for public latrine management, cleansing of community street and drainage networks. The actions in both cases were characterized by the spontaneous intervention of past political movements.

Private sector intervention in both cities had moved in to offset the deficiency in public services. Private companies undertaking refuse collection and pit emptying services play an important role. They however did not respect the bye-laws of environmental protection regarding final disposal sites.

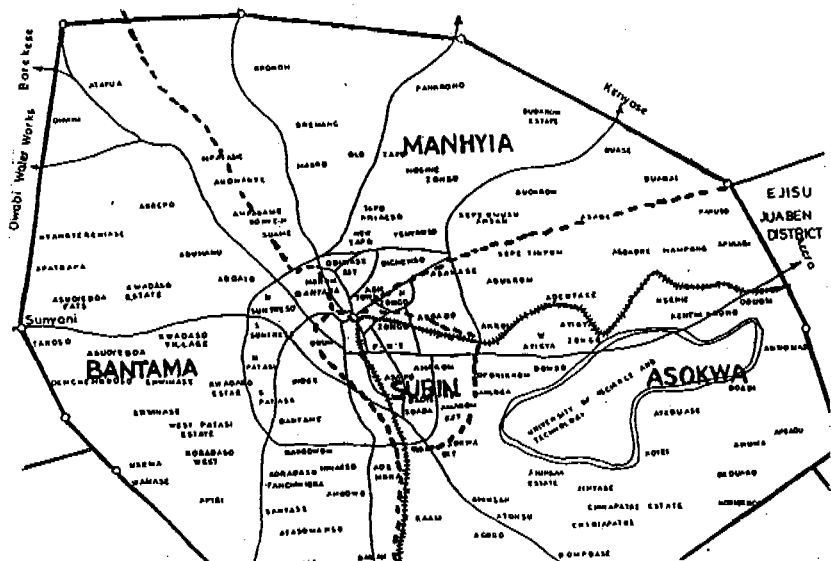
Households spend an appreciable amount of their income on sanitation in comparison with other expenditures (use of public latrines in Kumasi, sanitation tax in Ouagadougou and cost of emptying latrines in both cases) without enjoying the benefits of convenient and hygienic systems. Standards and bye-laws are very often unadaptable, inapplicable and consequently not applied by the people.

K U M A S I

Urban context

1- The city:

Kumasi, the second largest city in Ghana is situated north-west of Accra. It has a population of 700,000 people and covers an area of 150 km². The population growth rate, which was 5% before 1970, fell to 2.1% in 1984 essentially due to decrease in migration. The city is divided into four sub-metropolitan districts, each re-organized into many electoral areas. Land in Kumasi belongs to the Ashanti king and is allotted to families through village chiefs or custodians. Property title has to be endorsed by the state with site plans demarcated in line with the city plan. Right in the city center of Kumasi can be found one of the largest markets in Africa. This makes the core area very congested and so the municipal authority has drawn up a project for its total restructuring. Out of four sanitation master plans prepared for the city between 1951 and 1974, none has been implemented to this day.



▼ continued on p.14

O U A G A D O U G O U

Urban context

1- The city:



Ouagadougou, the capital of Burkina Faso, is situated in the Kadiogo province. It has a population of about 700,000 with a total land area of 200 km². Average density is 35 persons/hectare with an annual growth rate of 6.4% (from 1985-1990).



Since the revolutionary era, the city has been divided into thirty administrative sectors. There has been tremendous development since 1983, due to the planned demarcation and allocation of 60,000 plots. This operation allowed the central administration to temporarily control the development of the city without putting a halt on its expansion. The construction of new houses ceased since 1986 ; however, the presence of many unoccupied plots has led to pockets of make-shift housing, particularly in the peripheral areas.

▼ continued on p.15

Tenement areas:

Density.....300-600 persons/ha
 Water consumption.....60 litres/person/day
 Septic tanks.....40%
 Bucket latrines.....40%
 Public latrines.....60%
 Sewage disposal.....open drains

Traditional areas:

Density.....80-250 persons/ha
 Water consumption.....40 litres/person/day
 Bucket latrines.....40%
 Public latrines.....60%
 Sewage disposal.....open drains

Government housing:

Water consumption....80-100 litres/person/day
 Septic tank.....100%
 Pipe borne water.....100%
 Sewage disposal.....deficient soakaway pits

High income residential zones:

Density.....50 persons/ha
 Water consumption..100-200 litres/person/day
 Septic tanks.....100%
 Sewage disposal.....soakaway pits

source : SSP-K

2 - Housing stock:

85% of residents in Kumasi live in rented accomodation. Most tenants live in tenement housing (25%) and indigenous houses (53%) where multiple families generally rent a building and often sub-let one or two rooms to other family members, New government estates (16%) and high income housing (6%) make up the rest of the housing stock.



Tenement housing

85% of residents in Kumasi live in rented premises. A building accommodates at least four households with each household numbering an average of six people.



Traditional housing

Average density in Kumasi is 150 persons/ha.

O U A G A D O U G O U

2 - Housing stock:

More than 75% of houses are occupied by their owners. In most cases, one household comprises 6 to 8 inhabitants.

In Ouagadougou different housing types can be found next to each other. Four different housing types are however visible in the whole city;

- High income housing represents 11% of the housing stock. Buildings are constructed with concrete bricks. Plots are serviced with water and electricity as well as water closets.
- Medium to high residential housing represents 18% of the housing stock. Houses are constructed with cement and sometimes mud bricks. Plots are serviced with electricity and potable water (stand-pipes are situated in the courtyards) and have pit latrines.
- Low to medium residential housing represents 27% of the housing stock. Houses are built with mud bricks and plastered with cement.

City landuse pattern

Total area of city.....	19,500 ha
Built up area.....	10,260 ha
- Occupied sites.....	3,660 ha
- Unoccupied plots.....	4,680 ha
- Squatter settlements.....	1,930 ha
Undeveloped areas.....	9,242 ha

Densities

Demarcated and planned areas	
- <50 persons/ha.....	(18% of pop.)
- <50-90 persons/ha.....	(25% of pop.)
- >90 persons/ha.....	(11% of pop.)
undemarcated and unserviced plots	
- <25 persons/ha.....	(46% of pop.)

Level of services

Access to piped network.....	38%
Traditional latrines.....	57%
VIP latrines.....	24%
Septic tanks.....	13%
No access to private latrines.....	6%

source : SSP-O



Building types in the city center

Average population density in Ouagadougou is 35 persons/ha.



Traditional and medium quality housing

▼ continued on p.17

Density in the tenement area is between 300 to 400 persons per hectare. 95% of households have electricity, with charges based on a progressive tariff structure.

This heavily penalizes the poor who, generally live in compound houses with many households all connected to one meter and subsequently pay relatively higher unit electricity charges. The electricity bill is shared amongst all the tenants.



Tenement housing

3 - Water:

60% of households are connected to pipe-borne water. Most households have a standpipe in the courtyard. The average water consumption per person is 60 litres/day. Water rates are progressive, based on defined levels of consumption and averages around \$0.20/m³ for consumption ranging from 18.2 m³ to 45.5 m³. Those not

connected to the network buy water from private stand pipes, from neighbors or from other vendors at a price of \$ 0.01 - 5 cedis for a bucket of 13 litres of water. A surcharge of \$ 0.35/m³ is paid by each household for the use of public stand pipes.

4 - Sanitation:

75% of the 700,000 inhabitants in Kumasi do not have access to improved or hygienic latrines:

- 40% use public latrines.
- 25% use bucket latrines.
- 25% use septic tanks.
- 5% use pit latrines.
- 5% use the bush.

90% of wastewater and excreta is dumped untreated in nearby rivers and on vacant plots in the city. Untreated industrial waste is also discharged into streams which pollute the water bodies downstream.

Maintenance cost of sanitation:

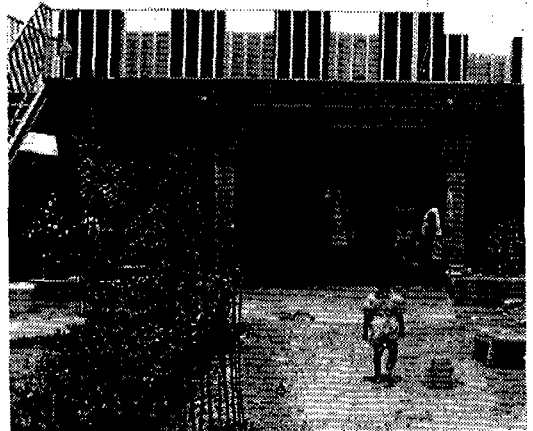
- Household facilities:
Emptying services
for septic tanks ... 10,000 cedis /yr
Bucket latrines.... 28,000 cedis /yr
- Public latrines:
36,000 Cedis /family /year.

Each day, the city produces on the average around:

- 100,000 kg of feces (25% dry weight).
- 1,000 m³ of urine.
- 1,000 m³ of wastewater from septage.
- 12,000 m³ of wastewater from kitchens and bathrooms.

Water is either bought from stand pipes or from vendors who deliver at the doorstep. Some people have private wells. Traditional latrines are generally used.

- Traditional housing constitute 44% of the housing stock (on the peripheral zones). Houses are constructed with mud bricks. Sources of water supply are similar to that of average income residential areas. Either traditional latrines or the bush is used for sanitary purposes.



High income residential area

3 - Water:

40% of the population is connected to pipe borne water; with most people having a standpipe in the courtyard. Average water consumption per household is 30 litres /day. There are five different rates for pipe borne water and a special rate for raw water. The average tariff for pipe borne water is 200 FCFA/m³. Those unconnected

to the network buy water from neighbors or street vendors at a rate of 125 FCFA for 200 litres of water, about three times more expensive than the amount paid by those connected by the network.

4 - Sanitation:

80% of inhabitants have traditional latrines, most of them in very poor conditions (dangerously broken slabs, flies, polluting nearby wells) . 13% of households have septic tanks (WC) and 7% have no sanitary facility whatsoever in their houses. Waste water from the central market and the Yalgado hospital is collected through an independent sewerage network which empties into a treatment facility or some sort of pre-treatment station which has broken down for some time now. The septage is therefore directly discharged into the natural environment.

Investment and maintenance cost of sanitation facilities:
<ul style="list-style-type: none"> • Traditional latrines: 12 000 to 15 000 FCFA. Maintenance: 1 000 FCFA/yr. • Vault latrines: 60 000 to 100 000 FCFA. Maintenance: 30 000FCFA/yr.

More than 20 000 m³/year of fecal material (composed of 500 tons of sludge) emptied from septic tanks, vault and traditional pit latrines is also discharged into the urban environment without any prior



Untreated excreta dumped on empty plots

Two thirds of excreta is dumped in the outskirts of the city, with most of domestic waste water channeled into open drains. Septage represents about 80% of waste water and 85% by volume of water carried by streams and rivers surrounding Kumasi during the dry season.

Storm water drains into open drains which empty into the Oda river; making the use of the river (for domestic uses and for animal watering as well as for bathing and swimming) very dangerous.

5- Legislation and regulations:

A new regulation prohibits the use of bucket latrines, conservancy laborers emptying latrines as well as the construction of public latrines outside strictly public or commercial areas. The regulations emphasis the pre-treatment of industrial wastewater before its discharge into a sewerage system.

These new laws are still very far from being implemented and thus cannot be rigorously applied at present.



Excreta dumped in the street

treatment. Waster water from industries (slaughterhouses, breweries and tanneries.) which amount to more than 600 000 m³/yr are also discharged into the natural environment without any pre-treatment and is used by horticulturists and vegetable growers.
Dams serving as a source of drin-

king water in Ouagadougou are polluted by run-offs from open storm water drains which are usually filled with solid waste. Only seven primary schools out of one hundred and thirty three have traditional latrines, which are very often in very bad conditions (except those reserved for the teachers).

.....

5- Legislation and regulations:

A lot of regulations exist. However they are very difficult to enforce due to the paucity of finances for their implementation and the lack of personnel for inspection. Technical arrangements are inappropriate in the existing context (conception of septic tanks, standards for discharging, classification of receiving bodies...).

Institutional framework

General organization:

In 1988, a decentralization policy was initiated by the government of Ghana. The administration of the city is now divided among several actors:

A 90-member metropolitan assembly (KMA): Sixty of these members are elected from four sub-metropolitan areas of the city. The remaining thirty members, including the metropolitan secretary (now Metropolitan Chief Executive), are appointed by the government.

5% of the national budget is allocated annually to all District Assemblies including KMA, which is then shared amongst the four sub-metropolitan districts. The sub-metropolitan

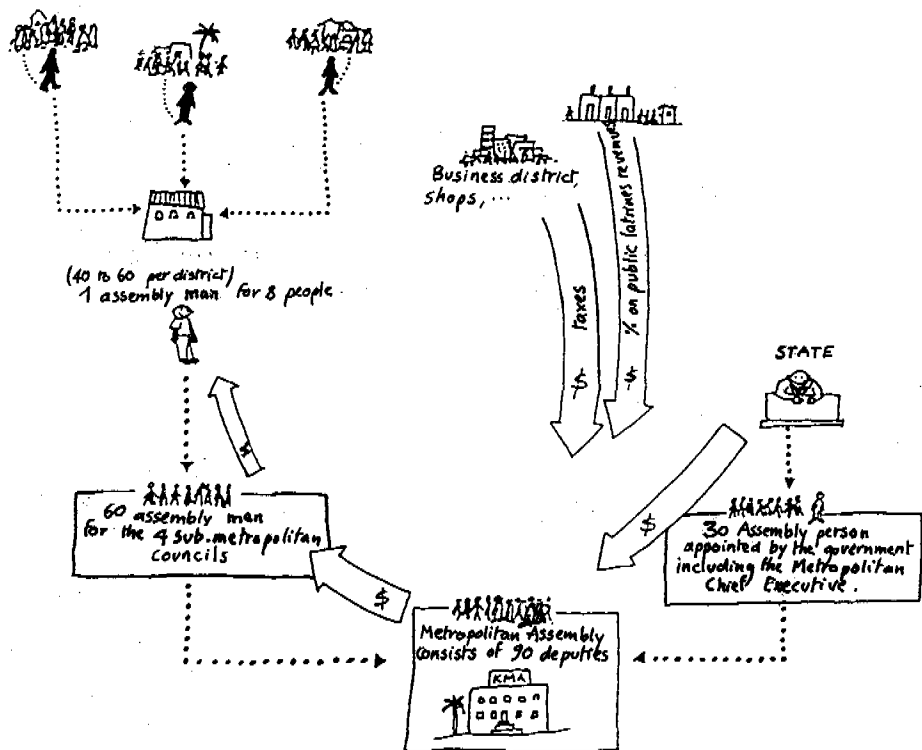
districts in turn transfer a part of their allocated amounts to projects of local committees.

Local revenue (from commercial activities, public latrines....) are distributed in the same way.

Electoral areas, comprising 4 to 6 unit committees are also allocated 2.5 million cedis per annum by the KMA.

The decentralization policy as well as financial autonomy allows the local authorities and communities the flexibility to make decisions and take the necessary actions to quickly and effectively improve the standard of living without resort to any complicated bureaucratic procedures.

Institutional organization and municipal budget distribution



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Institutional framework

General organization:

There is no decentralized administration in Burkina Faso. A decentralization program and municipal structure reform is currently being prepared.

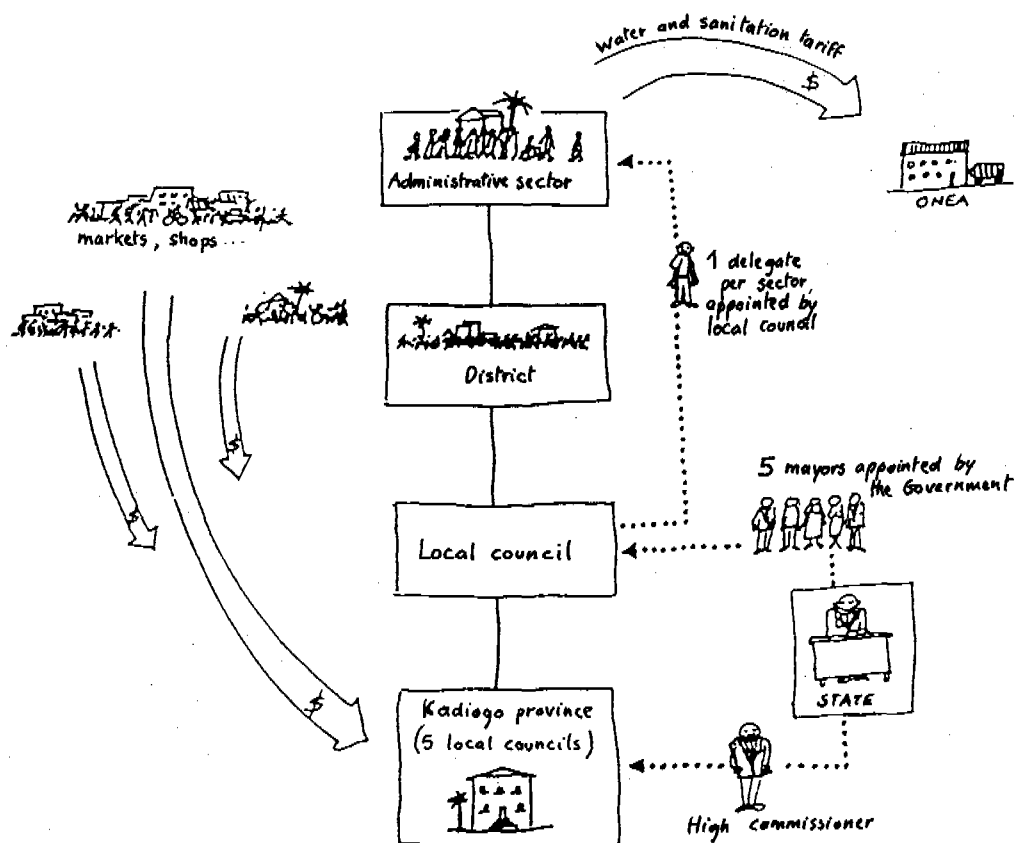
Kadiogo province, where Ouagadougou is located, is governed by special authority composed of 5 mayors, a secretary general, directors and heads of departments of provincial services. The province is headed by a high commissioner appointed by the government. In 1990, the budgets for operations and equipment were 700M FCFA and 800M FCFA respectively. Due to lack of personnel, financial and logistical support, the

activities of the 5 communes are more or less concentrated on the registry office, problems of land ownership, control of street hawkers and relocation of traders. Though people have the desire to improve sanitation conditions in their sectors, they do not have the appropriate means to do so. For all operations they have to fall on the Economic Division of the High Commission, which involves very long procedures, inefficiency and aggravated by problems of coordination. Each community appoints administrative representatives in the different sectors whose roles are to transmit information between the communes

and the people. Centralization of power and the lack of financial autonomy creates occasional hold ups on community project which discourage the local initiatives.

Active involvement of Non Governmental Organizations (NGOs) and External Support Agencies (ESAs) in different sectors of development since 1985 has had the tendency of reducing the awareness of local actors to their own responsibility and in some cases destabilize social and institutional relationships.

Institutional organization and municipal budget distribution



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CONTEXT

K U M A S I

The Kumasi Metropolitan Assembly (KMA) is the municipal authority responsible for overall management of the city. It comprises four sub-metropolitan district councils.

Management of sanitation services and institutional responsibilities within the KMA before the initiation of the project were fragmented. The Medical Officer of Health (MOH), Mechanical Engineer's (MEngD) and the Metropolitan Engineer's (MED) Departments were jointly responsible for planning, development, operation and maintenance of non-sewered domestic systems, public latrines and solid waste collection and disposal.

Overall, the division of responsibilities between the three principal public agencies was fraught with duplication and lack of efficiency.

The university and the military provide waste management services on their properties and the Public Works Department (PWD) is involved in commercial emptying services for public latrines and domestic septic tanks. Most bucket latrines are emptied by private conservancy laborers.

Main institutions:

- Metropolitan Medical Officer of Health (MOH) Department.

This department was considered the principal department for waste management in the city. Its activities included recruitment and supervision of the labour force required for collection and disposal of solid waste and nightsoil, as well as street and drains cleansing, public health monitoring and enforcement of sanitary bye-laws.

These responsibilities were however not adequately discharged. The department was beset with constraints including low level skills of professional staff, weak planning and management capability and a serious

lack of motivation among staff, due largely to low salaries and the lack of staff development possibilities.

- Mechanical Engineering Department.

The responsibilities of this department related to waste management included the control of transport operations, and the repair and general maintenance of plant and vehicles involved in refuse, nightsoil and landfill management. The waste management operations receives between 25%-30% of the city's annual budget, the bulk of which is used for the operation and maintenance of vehicles. However, these responsibilities were not carried out efficiently. The department depended on the parent ministry, Local Government, for the procurement of vehicles and equipment for its operations. The department thus did not develop any planning capacity for vehicles and equipment for its operations.

Maintenance capability was fair but problems existed with the scheduling of vehicles and equipment in day-to-day operations, often resulting in under-utilization.

- Metropolitan Engineers' Department.

This division plays a marginal but important role in the construction of facilities for waste management.

Its specific responsibilities include: the inspection of building permits for sanitary installations, supervising the construction of KVIP latrine, management of civil works and rehabilitation of public latrine sites including the design and construction of sludge holding and septic tanks. All preliminary studies and surveying of proposed landfill sites and other waste treatment stations were undertaken by this department. An examination of the Department's operations however revealed its poor capacity in planning

25% to 30% of the city's budget is allocated to waste management operation.

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Institutions responsible for sanitation:

Many institutions and agencies are involved in sanitation activities in Ouagadougou. However, their roles are confused and their responsibilities overlap. This often causes conflicts between officials to the detriment of services rendered to the public.

Public Institutions:

- Economic Division of High Commission.

The technical services division of Kadiogo Province High Commission is operationally responsible for refuse collection, city cleansing and the construction of stormwater drains in cooperation with the ONASENE. It also undertakes emptying services. The department has of late benefited from technical assistance from the Second Urban Project financed by the World Bank-International Development Association (IDA).

- National Water and Sanitation Utility (ONEA).

Created in 1985, this public utility is under the Ministry of Water. Its objective is to create and manage all infrastructure directly or indirectly concerning urban and peri-urban sanitation. It also controls the production and distribution of potable and raw water in the urban and semi-urban towns of the country. The statutes of ONEA indicate that it can directly execute all operations or delegate their operation and control to private and public bodies.

The division's operations benefit from external technical assistance for improvements in management, accounting, human resource and technical sector improvement in the department of sanitation

On paper, ONEA is also responsible for stormwater drainage and sewerage networks.

- Department for Health Education and Sanitation (DESA).

Created in 1988, this division is under the Ministry of Health, Social and Family Affairs. It has the responsibility to authorize and inspect construction works and private sanitary installations (VIP latrines, septic tanks and collecting pits). This has been the origin of conflicts with the functions of ONEA.

DESA executes programs linked with preventive health activities from external resources and its operational budget is integrated into that of the Ministry of Health, Social and Family Affairs.

- National Office of Cleansing, Maintenance and City Beautification (ONASENE).

Created in 1986, this office has the monopoly of domestic refuse and nightsoil collection. It sub contracts these services to the Economic Division of the High Commission as well as private companies. This office has limited resources (three employees for nightsoil collection and only one 8m³ suction truck for the whole city).

- Department of Pollution and Nuisance Control.

This department was to be replaced by the Pollution Prevention and Environmental Sanitation Improvement department in 1993.

Its duty was to develop a global strategy to fight all forms of pollution and nuisance and to study the impact of projects and economic development programs on the environment. It was further charged with the sensitization, organization and education of the people to improve their living conditions.

Inter-Ministerial Commissions:

- The Technical Committee for Water,

ONEA collects and manages sanitation taxes paid by subscribers (5% of the cost of every m³ of water consumed).

The sanitation tax of about FCFA 300 million per year had never been used for sanitation activities before the initiation of the project.

and management in spite of the high calibre of staffing (engineers, architects and foremen). The numerous responsibilities of the department inhibits it from properly carrying out the planning, implementation and supervision of on-going works.

The department requires a better management policy to overcome these inadequacies.

Generally, the sharing of responsibilities amongst three principal city institutions carries with it redundancies and a lack of coordination. Even though the city allocates between 25% and 30% of its development budget to refuse and excreta management, this investment is not reflected in efficient services.

The city spends more than \$0.25 million on salaries for about 900 conservancy and refuse laborers. All new investments, apart from \$0.06 million set aside annually for the construction of public latrines, are grants from donor agencies.

The entire waste management operation is centered around labour management for public cleansing activities.

The fragmented approach to waste management proved to be one of the weaknesses of the institutions involved in waste management services.

Community and private sector organization:

The involvement of non governmental organizations (NGO's) and community groups in waste management was practically non-existent in the city until 1985, when Committees for the Defense of the Revolution (CDR) took responsibility for the management of most public latrines. Until then, community involvement was limited to providing communal labor. However, some benevolent youth associations helped in local clean-up campaigns.

(headed by the Minister of Water) is made up of members from other ministries and is charged with proposing planning options for water resource management within the framework of local planning as well as harmonizing all public and private activities relating to the use of water. This committee has practically never functioned since its creation in 1978.

- The national antenna of the Regional Center for low-cost Drinking Water and Sanitation, which is made up of representatives from different ministries is charged with the promotion of potable water supply and sanitation methods for low income communities. This will be done through training by professionals and trainers from the technical schools, development and implementation of research programs, raising of awareness, collection and dissemination of information.

Educational and Research Institutions:

- International School of Engineers for Rural Installations (EIER).
- Committee for Inter-African Hydraulic Studies (CIEH).
- Regional Center for Low- Cost Drinking Water and Sanitation (CREPA).
- Advanced School of Technicians in Rural Infrastructure. (ETSHER).

The Private sector and NGO's:

- Five companies undertake nightsoil collection in the city. These companies pay a monthly fee of 5 000 FCFA to ONASENE.

The most well equipped private suction truck owner has three suction trucks and makes on the average three trips daily at a fee of 6 000 FCFA per trip. His monthly revenue totals about 1 100 000 FCFA.

- Non Governmental Organizations: Despite the large number of NGO's in Ouagadougou, only a few are engaged in sanitation.

These NGO's are basically involved in sensitization of the people on health and environmental problems.

Examples of these NGOs are: ADRA, ANGDB, EAST, Naturama, ABUSE, Anti -Malaria Committees....

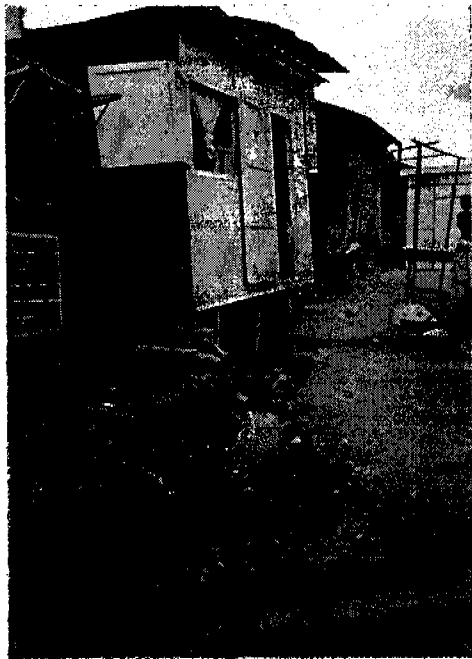
Clean-up campaigns organized by revolutionary committees during the era of President Sankara are still occasionally launched by the present government (clean-up days).

CONTEXT

KUMASI & OUAGADOUGOU

Sanitation situation in:

... in Kumasi



Typical discharge conditions of domestic wastewater



Manual unhygienic emptying of Bucket latrines

... in Ouagadougou



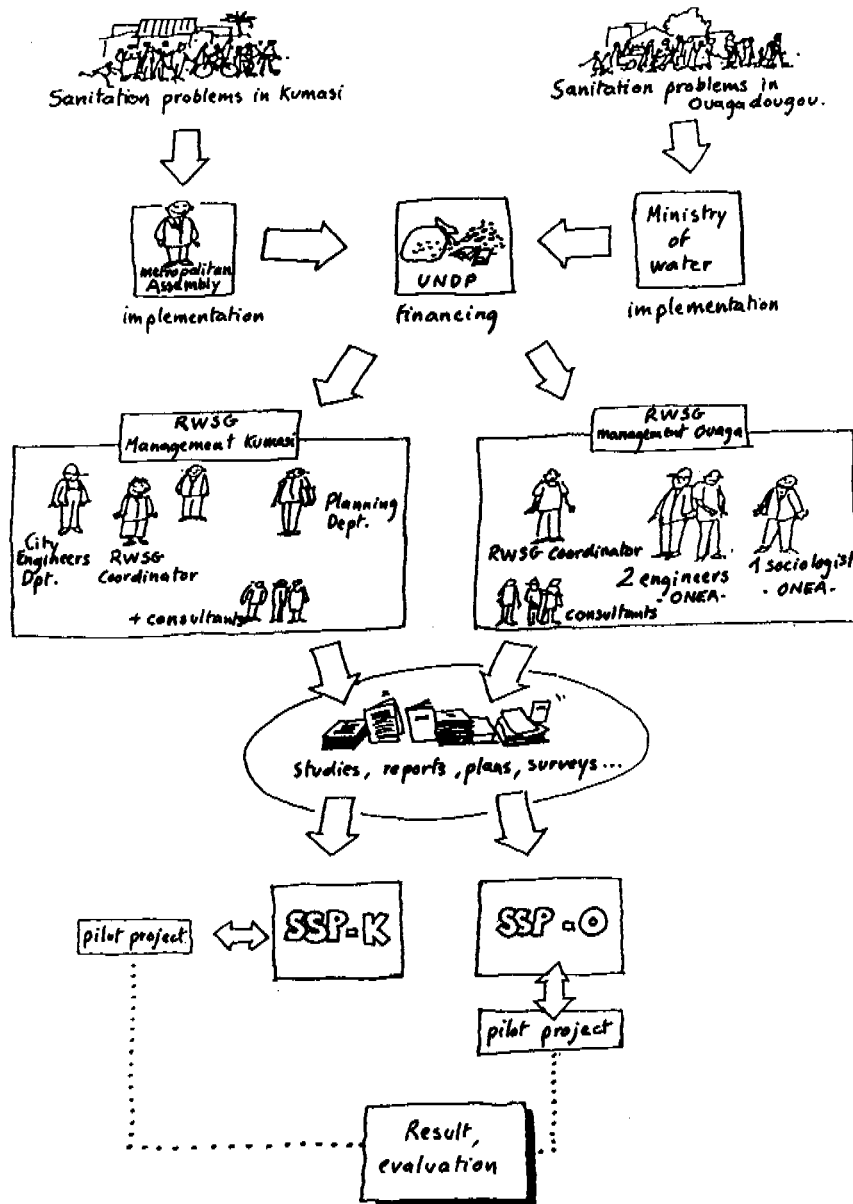
Badly constructed soakaway pits for domestic wastewater



Latrines/showers in deplorable conditions

2 - The two pilot projects

Project Outline



KSP Project Profile

- Financing:**
 - Strategic Sanitation Plan for Kumasi and pilot project(s) : UNDP \$ 700 000/ODA \$ 300 000/ IBRD \$ 40 000/ Ghana government and KMA 150 million cedis.
- Duration:**
 - 5 years (beginning January 1989 to March 1994).
- Implementing agency:**
 - Kumasi Metropolitan Assembly.
- Technical assistance:**
 - RWSG-WA
- Partners:**
 - University of Science and Technology (UST), Kumasi.
- Final output:**
 - Development of strategic sanitation plan for Kumasi, building of 200 home latrines, 6 blocks of public latrines and a simplified sewerage scheme for 20,000 people.
- Pilot project areas:**
 - Central Business District (CBD), Asafo, Moshie Zongo, Ayigyia, South Suntreso areas.
- Project beneficiaries:**
 - The people of Kumasi.

Objectives of the project:

To improve sanitation in the whole city of Kumasi:

- 1 - To develop and implement a pilot human waste management project, consisting of three pilot schemes, in Kumasi city.
- 2 - Ensure replication of the pilot project results, through the preparation of a follow-up sanitation investment program in Kumasi and identify resources for its implementation.
- 3 - Strengthen local capacity to plan, design and implement urban sanitation projects, making such projects more effective in attracting and utilizing investments.
- 4 - Establish a sustainable training network center at the University of Science and Technology, Kumasi to ensure the dissemination of experiences.
- 5 - Promote the formulation and implementation of sector programs.

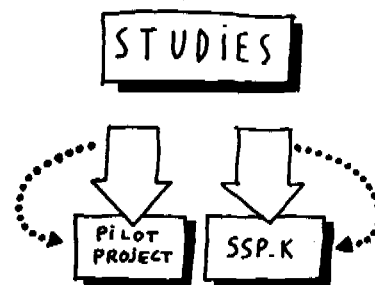
Project implementation:

The project team is local and multi-disciplinary and is composed of:

- A project coordinator from RWSG-WA.
- A project co-manager from KMA.
- An urban planner - Department of Town and Country Planning/KMA.
- A sanitary engineer - KMA.
- A health education specialist - KMA (MOH).
- An accountant - KMA (part-time).
- A community development specialist. (Department of Community Development).

The Training Network Center Team:

- A communication specialist.
- 2 sanitary engineers.
- A health education and training specialist



BKF Project Profile

- Financing:**
 - Strategic Sanitation Plan for Ouagadougou: UNDP \$300 000 /Burkinabe government 21,5 million FCFA.
 - Pilot project: UNDP \$550 000/Burkinabe government 72 M FCFA.
- Duration:**
 - 3 years (from 1991 to 1994).
- Implementing agency:**
 - ONEA.
- Technical assistance:**
 - RWSG-WA.
- Partners:**
 - NGO's, ADRA, GRAAP, CREPA.
- Final output:**
 - Formulation of the strategic sanitation plan and construction of 1000 facilities in the pilot phase.
- Pilot project areas:**
 - sectors 2 and 16.
- Project beneficiaries:**
 - The people of Ouagadougou.

Objectives of the project:

To improve sanitation in the whole city of Ouagadougou:

- 1 - Propose a 10 year Strategic Sanitation Plan for Ouagadougou using low cost and appropriate technical solutions.
- 2 - Test the feasibility of recommended technical, financial and institutional options and refine strategic plan by applying lessons learnt during the implementation of the pilot projects.
- 3 - Develop a methodology for demand promotion.
- 4 - Develop an efficient sanitation division within the water and sanitation sector.
- 5 - Involve the private sector and the community in sanitation programs.

Project implementation:

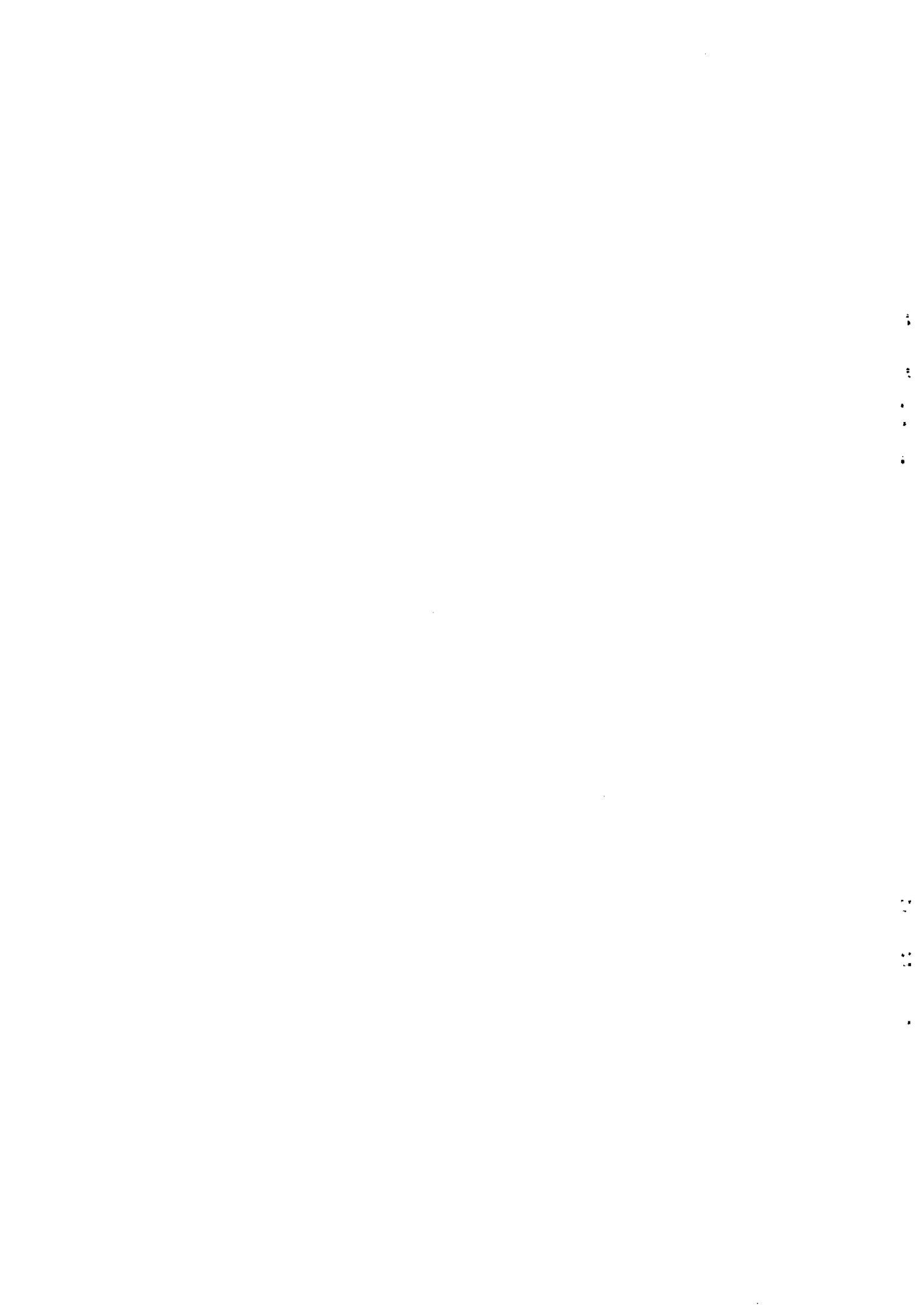
A multi-disciplinary project team was established for the three years duration of the project; most of the members were employees of ONEA. It was envisaged that the team will constitute the sanitation division within ONEA and will be charged with pursuing similar actions after the project.

The project team was initial composed of:

- A project coordinator from RWSG.
- A sanitary engineer -ONEA.
- A sociologist -ONEA.
- A planner seconded from the ministry of planning and equipment.
- A civil engineer -ONEA.

The project team should have also included a health education specialist. However, this was rejected by the Minister of Health because of disagreements on the terms of reference of the project.





3 - Approach

- Survey and assessment of demand.
- Development of the Strategic Sanitation Plan.
- Implementation of pilot project to test the recommendations.
- Scaling up of the pilot project experience.

Preliminary Survey:

In both cases, a lot of surveys and studies were undertaken by local and international consultants and project teams under the supervision of RWSG. Three types of studies essentially contributed to the development of the strategic sanitation plan and the definition of principal areas of intervention :

- Technical studies.
- Financial and institutional studies.
- Demand estimation or “willingness to pay survey”.

Technical studies examined the objective data which permitted the selection of the appropriate sanitation technologies: the soil type, topography of the site, level of the water table, percolation rate, urban characteristics....

The financial and institutional studies identified the roles and responsibilities of each institution involved; previous knowledge of public or external sources of financing allocated to sanitation services in order to redefine financial and institutional arrangements on the following basis:

- Precise sharing of responsibilities for the different tasks.
- Recovery of costs in such a way as to reduce the dependence on external financing and to render the system sustainable.

Willingness -to -pay surveys consisted of interviewing households to know their living conditions and existing sanitary facilities, evaluate their proportion of income spent on sanitation as well as their financial capacity and their willingness to contribute towards improved sanitation. The survey helped to estimate the demand and the methods of financing that go with the selected types of facilities and level of services.

Alongside these specific studies, field surveys on social relations within communities were carried out by the project team. These included the examination of:

- Existing dynamics.
- Relationship between actors and institutions.
- Opposition groups and local conflicts.
- Interest and objectives of the different partners concerned.

It was only later during the pilot project implementation stage that the interests of the different partners as well as the appropriateness of their respective demands was better understood.

During the initial phase, the project team encountered some difficulties in adapting and using specific studies undertaken by external consultants. These difficulties were however surmounted by :

- Precise re-definition of the terms of reference and the objectives of the project.
- Close collaboration with external consultants.
- Regular discussions with external consultants during the course of the project.



K U M A S I

Situational Analysis

Various technical, institutional, socio-economic and financial studies were carried out by the project team. Consultants and RWSG staff helped to clarify the initial objectives, define the proposals of the strategic sanitation plan and areas of intervention.

In the initial project document, it was anticipated to phase out bucket and public latrines, and replace them with private and improved sanitation systems; but subsequent studies

demonstrated that public latrines being used by 40% of the population could generate a regular source of revenue for their maintenance and was, at the moment, responding to the real demands of the communities.

Principal studies undertaken:

- 1- *"Household demand for improved sanitation services"*
by D. Whittington, D.T. Lauria, A.M. Wright of the University of North Carolina(USA) /UNDP World Bank - sept-dec 89:

Kumasi Case Study:

- Socio-economic conditions, housing

characteristics and physical infrastructure.

- Existing sanitation facilities.
- Preferences and wishes of households for different sanitation systems.
- Willingness of households to pay for improved services.

▼ continued on p.36

Situational Analysis

A lot of technical, financial, institutional, geological studies, etc... were conducted during the first year of the project by the project team, RWSG and international consultants.

These studies which gathered information from different institutions and resource persons resulted in:

- First, producing a document on the sanitation situation in Ouagadougou in March 1991. This resulted in exchange of ideas between the different partners (financing partners, administrators and

technical personnel...). It also led to an information seminar.

- Secondly, the production of a first draft of the Strategic Sanitation Plan in October 1991 which defined the principal areas of intervention: The development of a sewerage network and a treatment system (through waste stabilization ponds) for the city center, industrial zone and the hospital... and home latrines for the rest of the city.

Principal studies undertaken:

1 - *"Willingness to pay for improved sanitation in Ouagadougou" by Mir Anjum Altaf and Jeffrey A. Hughes of the University of North Carolina, February to March 1991.*

This Willing-to-pay study was carried out across the whole city covering the following aspects:

- Housing characteristics.
- Household technological choices.
- Socio-economic conditions of households.
- Water and sanitation facilities.
- Cost estimation for water and sanitation installations for households.
- Proposals for financing arrangements.

▼ continued on p.37

PROCESS studies

K U M A S I

Financial and cost recovery studies:

- 2 - "Kumasi sanitation financing options study" by J.Owusu-Akyaw:
- What types of sanitary facilities are desired by the people?
 - Which financing should be mobilized?
 - Conditions for finance mobilization.
 - What should the recovery rates be?
- 3 - "Feasibility study on the improvement of public latrines in the CBD of Kumasi" by T. Osei-Tutu /1992:
- Market studies and demand analysis.
 - Technical studies and maintenance requirements.
 - Financial analysis.
 - Management of public latrines.
 - Environmental aspects.

Different studies on low cost technology options:

- 4 - "Development and implementation of UNDP/KMA low cost on-site sanitation project" by Seth Adu-Asah / 1989.
5. - "Review of sanitation technologies for the project" by E. A. Kuma, Asafo-Boakye & partners / 1989.

It should be emphasized that in addition to the general and special studies, the regular presence of the project team (who still continue with their regular waste management duties...etc.), permitted continuous discussions and exchange of ideas with resource persons, other municipal authorities, community leaders...on the projects objectives and varying points of view.

Willingness-to-pay (WTP):

Household are willing to pay the following for sanitation services:

Public latrines.....\$1.6/month/household
 Bucket latrines & WC..\$1.3/month/household

- 50% of people using bucket latrines are ready to pay up to
\$1.4/month for a VIP or a WC.

- 50% of people with WC are willing to pay up to
 \$1.1/month to be connected to sewerage network

- 75% of households interested in home latrines are willing to pre-finance 10% of the cost and pay up the remaining 40% in three years (with a 50% subsidy).

- 25% are ready to advance 30% of the cost to benefit from a 70% subsidy.

source: WTP survey

Annual household expenditure:

Rent \$27.6/household
 Water \$16/household
 Electricity \$20/household
 Public latrines \$14.4/household
 (5 to 10 cedis per visit)
 Bucket latrines \$10/household
 WC \$4.8/household
 (cost of water included)

source: WTP survey

Households have the habit of sharing water and electricity bills and contributing towards rents. The cost of maintaining latrines are likewise shared.

Kumasi has predominantly lateritic soils with rates of percolation corresponding to the long term infiltration rates of wastewater of about 15 to 25 l/m²/day. The level of the water table varies from 1.5 to 12 m.

These conditions generally favor the construction of home latrines but the height of the water table and infiltration rates in certain areas, particularly in the alluvial plains, can make the construction of on-site systems impossible.

The city's steep slopes permit the easy flow of stormwater and domestic wastewater, causing no floods or stagnation except along the river basins. The slope pattern in the city and the convergence of the drainage system contribute to the cleansing of the high density areas in the city.

source: soil percolation studies

O U A G A D O U G O U

Willingness to Pay (WTP):

- 80% of households say they are prepared to finance the cost of home latrines up to the tune of 50 000 FCFA (\$180).
- 25% of households say they are ready to borrow funds to finance latrines. Out of this number, 80% would be prepared to devote 3000 FCFA/month (\$11) to pay off the debt (repayment of a debt of 60,000 FCFA (\$218) in 24 months at 16% interest rate).
- Households whose rate of water consumption justifies their connection to piped network say they are prepared to devote 1500 FCFA/month (\$5.5) to the cost of sanitation .

These figures correspond to a fee of 60 FCFA/m³ for a household which consumes an average of 24 m³/month. (100 litres/person/day for a household of 8 persons).

source: WTP survey

- 2 - "Etude organisationnelle et de financement du service assainissement" by A. Lafrogne and T. Zegré in 1993:
- Institutional, legislative and regulatory context.
 - Characteristics of the different sanitation systems.
 - Basis for determining tariffs.
 - Proposal for the establishment of a department for sanitation.
 - Estimation of charges for the sub sector.
 - Operating income.
 - Cross subsidization.
 - Pricing arrangements.

3 - "la capacité de percolation des sols" by E. Ouayoro and A. Koné in 1991.

Annual household expenditure:

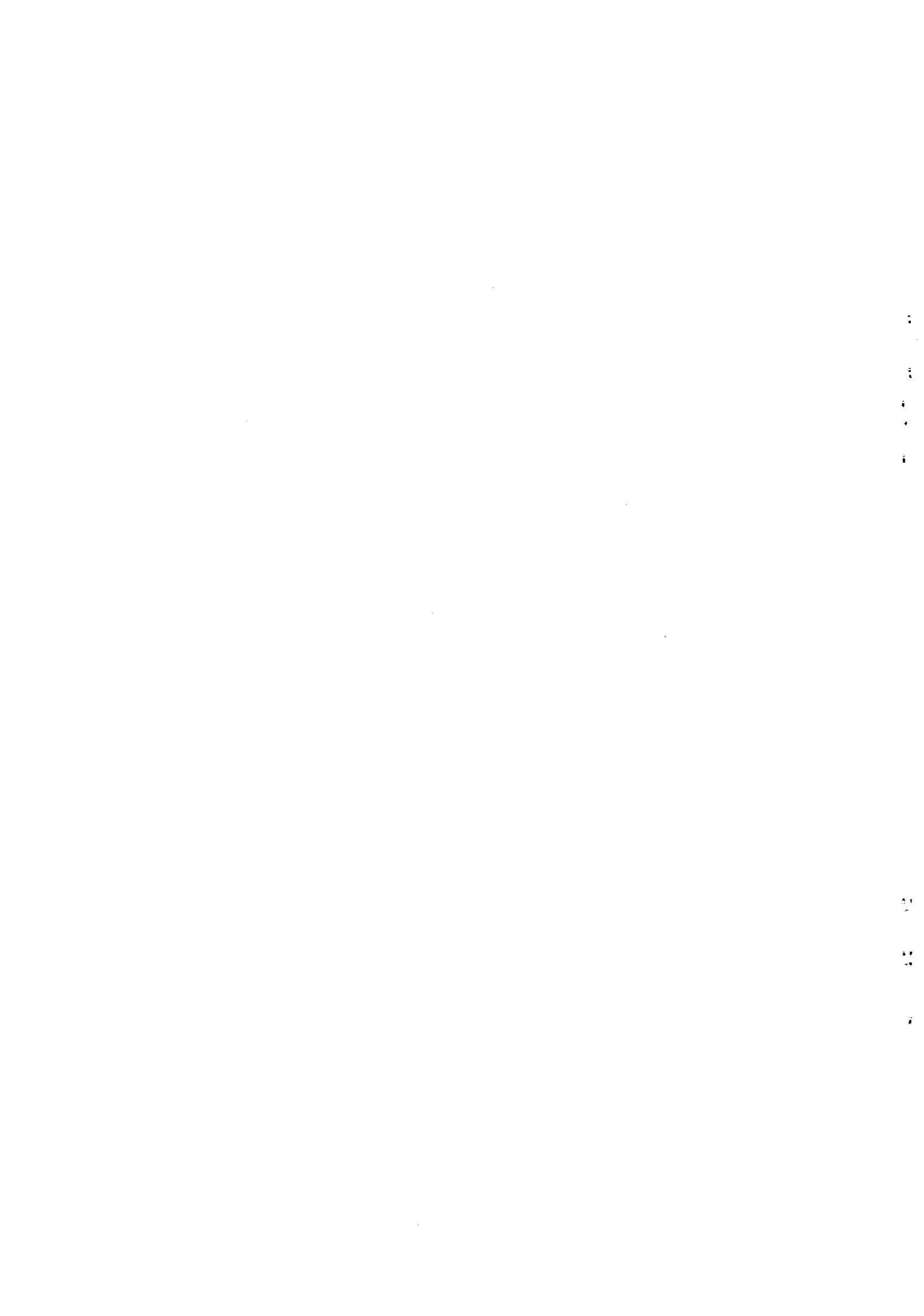
(conversion to dollar rates before devaluation. Jan 94)

Rent	88.000 FCFA = \$ 310
Water	31.000 FCFA = \$ 110
Electricity/petrol	44.300 FCFA = \$ 155
House maintenance ...	28.700 FCFA = \$ 100
Maintenance of Traditional latrine	
.....	10.000 FCFA = \$ 35
Maintenance of Vault latrine	
.....	30.000 FCFA = \$105

source: WTP survey

Ouagadougou lies on a flat terrain with an altitude of 300 meters. The geology consists of a mixture of granite and migmatites. The ground water table is generally about 30 meters deep except in the commercial and administrative area of the city. (where the depth to ground water is 1 meter) Soil percolation studies conducted in February 1991, illustrated that a large majority of soils in Ouagadougou were suitable for the construction of on-site sanitation. The results of this study in combination with other parameters (population density, water consumption) permitted the selection or the exclusion of various technology options.

source: soil percolation studies



Strategic Sanitation Plan:

- An examination of a range of technical solutions.
- Recommendation of options to fit the situation of different communities.
- Flexibility solutions which can change over time.
- An integrated approach.

The strategic sanitation planning process differs on the one hand from sectoral planning in its global approach and on the other hand from the classical master planning approach in its methodology and its orientation.

This process adopts a short to medium term planning period (10 to 15 years) to avoid planning constraints linked to unpredictable urban phenomena in the long term due mostly to uncontrolled population growth in developing countries.

The Strategic Sanitation Plan was prepared, in both cases, by local institutions and attempts to provide sanitation services to all sections of the society through the evaluation of different technological options and not only sewerage systems. It also gives due consideration to the willingness of the population to pay for improved services, institutional and financing aspects and proceeds to test these choices through the implementation of pilot projects.

Contributes to Decentralized Decision Making Process:

The integrated urban strategic sanitation approach addresses the following key concepts on how to:

- Work at the urban community level.
- Involve local authorities.
- Develop local capacities.
- Integrate the concept of shared management within the institutional arrangement (defined roles of public institutions, private sector, beneficiaries).
- Emphasize real opportunities.
- Work within global context of urban management.

Variety and flexibility in time and space:

The strategic plan anticipates varied technical solutions, adaptable to the current context of the two cities; these solutions could however evolve towards improvement in the living conditions and incomes of urban dwellers.

A basis for the future development of the city:

There existed no clearly defined urban policy in either of the two cities where the strategic sanitation plan were developed. This could pose problems of coherence in future however; the flexibility of the SSP allows for its adaptation to new urban developments. In another sense, when the strategic plan is approved, it could become the starting point for future planning of the city.

The development of tools for partnerships:

To facilitate the involvement of local partners in the project, the project team made an effort to disseminate information on the SSP among the general public and institutional actors through information seminars, radio and television programs in the case of Ouagadougou and meetings and working sessions as in the case of Kumasi. Therefore, in order to promote dialogue and obtain better cohesion of the different partners involved in the project, other partnership tools and methods are to be explored, developed and employed.

Emphasizes financial autonomy and sustainability:

The strategic sanitation plan seeks to reduce dependence by developing local expertise and setting up sustainable financial mechanisms which limits the dependence on continuous external support: cost recovery from beneficiaries, involvement of the private sector and strengthening of the local structures to manage funds efficiently.



K U M A S I

SSP-K, Strategic Sanitation Plan for Kumasi.

Contents:

Technical proposals:

Technical options were made based on the following criteria:

User preferences, willingness to pay, housing characteristics (availability of land, number of persons per household, existing sanitary facilities), water use (type of water supply, amount consumed, volume of waste water), geological conditions (level of water table, rate of infiltration), operation and maintenance needs (types of cleansing materials, access to home latrines, availability of maintenance equipment) and costs (capital as well as operation and maintenance costs).

Recommendations of technological choices were based on two assumptions:

- Potential increase in demand with the people's consciousness of the advantages of improved sanitation services.
- Willingness of the population to pay should increase in proportion to improvements in the delivery of sanitation services.

- **Ventilated Improved Pit latrines:**

This is a traditional latrine with a vent to allow for ventilation of the pit in order to reduce odors and prevent the breeding of flies. In the built up areas double pit latrines covered with slabs or fitted with toilet seats have been designed.

- **Pour flush toilets:**

This is recommended for areas where water is used for anal cleansing. Very little water is required in its use as compared to cistern flush toilet (WC).

- **Septic tanks with infiltration trenches or soakaway pits.**

- **Simplified sewage system:**

Like conventional sewerage, it is designed to convey all domestic wastewater including wastewater from bathrooms and kitchens, into a treatment system. This system differs from the conventional sewerage system by the relaxation of the design criteria to allow for a reduction in the number of manholes and the utilization of smaller

The Strategic Sanitation Plan envisages that about 350 000 people will have access to home latrines by the year 2000.

The technical proposals respond to demand of the different categories of people as well as their willingness to pay for improved services.

O U A G A D O U G O U

SSP-O, Strategic Sanitation Plan for Ouagadougou.

Contents:

The implementation of the SSP-O will imply a 50% coverage rate for improved sanitation for the whole city by the year 2000.

Management of waste water and excreta in a coherent manner based on collection-treatment-disposal.

Technical proposals:

Technological recommendations of SSP-O are based on the feasibility of the technology and user preferences.

Different technologies proposed in the studies are single or double pit (VIP) latrines, pour-flush latrines (PFT), septic tanks with infiltration trenches/soakaway pits and conventional sewage network.

These options consider population densities, the housing characteristics, building types and especially the rate of wastewater infiltration for on-site systems. Equally considered were the people's preferences and the willingness to pay for improved sanitation. Because housing quality within a given neighborhood is variable, it was decided that the choice of sanitation system and its installation (new or rehabilitation of latrines, infiltration pits, showers) would be left to demanding households.

With regards to treatment, climatic conditions and availability of inex-

pensive land close to the city oriented the choice of waste stabilization pond systems.

Having a simple working mechanism without recourse to electro-mechanical equipment nor high qualified personnel, this system facilitates the degradation of organic materials and eliminates pathogens.

Sewerage is recommended only for the city center and the industrial zone.

PROCESS strategic plan

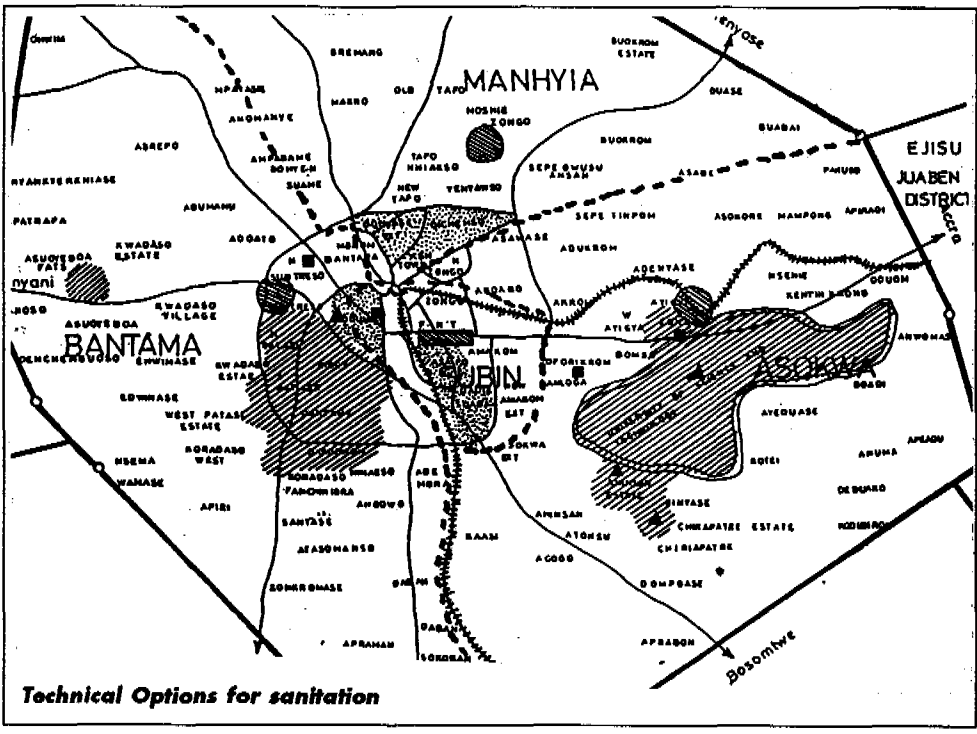
K U M A S I

diameter pipes laid in shallow trenches and at gentler slopes.

• The waste stabilization ponds system:

It is a simple and less expensive system to construct, operate and maintain, compared with other mechanical systems. Very little operational control is necessary. It is also very efficient in parasites, pathogens and virus elimination and produces better effluent quality than most other treatment systems.

Forecasts for the year 2000:	
Home latrines	12 700
Public latrines.....	5 blocks in the city center and 28 others



LEGEND	
	On site sanitation pilot zone
	Simplified sewerage pilot zone
	WC connected to septic tanks
	Public latrines
	Existing sewerage network

▼ continued on p. 46

PROCESS strategic plan

O U A G A D O U G O U

Two options were studied:

■ Option 1:

A collector system conveys waste water from the city center, hospital and principal hotels into the lagoon basin situated near the Bois de Boulogne.

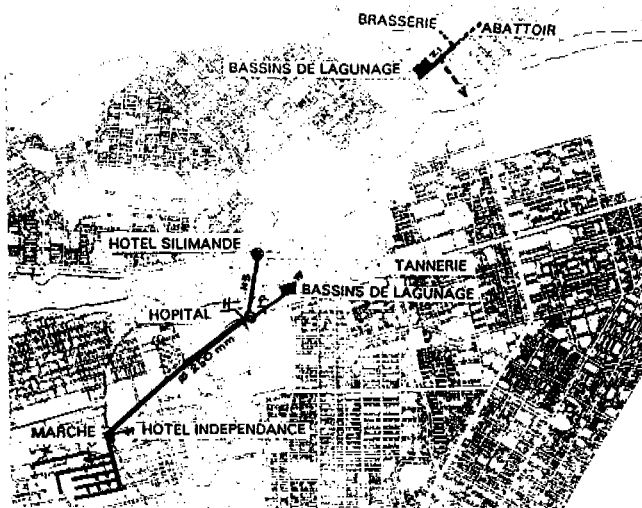
Treatment of effluent from the slaughter house tannery, brewery and other solid wastes take place in a stabilization pond situated in the industrial zone.

■ Option 2:

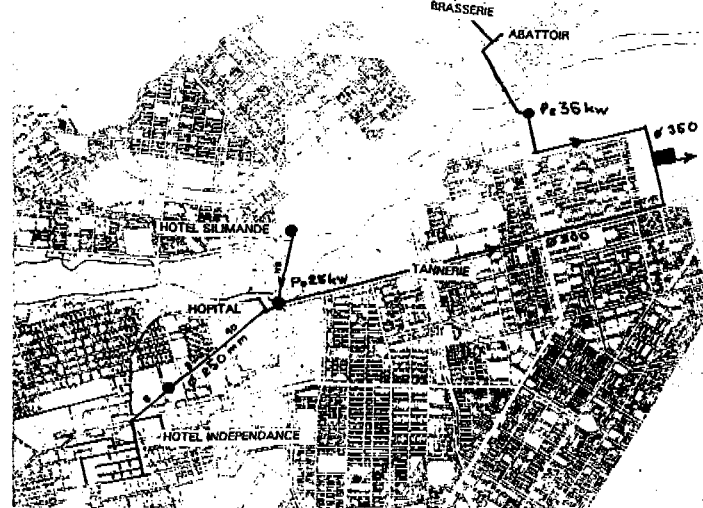
A collector system conveys waste water from the city center, the hospital and principal hotels as well as that from the industrial area to a special treatment lagoon located on the outskirts of the city

This option was adopted during a national workshop (March 1993) on the SSP for Ouagadougou while waiting for the results of an environmental feasibility study on the site of the lagoon.

Forecast for the year 2000:	
Rehabilitated traditional latrines	28 125
Vault latrines	4 600
VIP	6 250
Pour flush toilets	12 500
Septic tanks	6 025



Option 1



Option 2

On-site sanitation is recommended for other parts of the city

Between now and the year 2000, the SSP for Ouagadougou proposes the building of 19 000 double pit VIP or pour-flush toilets and soak pits for waste water in medium to low income residential areas. For school sanitation, the SSP recommends the construction of 166 blocks of 7 latrines each in primary and public secondary

schools to serve about 75 000 pupils. During the course of the demonstration project, some households interviewed expressed their interest in the rehabilitation of traditional latrines and the construction of showers. These wishes were therefore incorporated into the program.

Remarks:

- Experience has shown that the type of sanitation facility chosen determines the modes of negotiations and the degree of participation of the people concerned: In Ouagadougou, the choice of on-site sanitation aroused local dynamism (information

meetings in the project office located in the neighborhood, discussions with neighbors, training of artisans, contracts between households and private contractors) which is not the case with the sewerage system within the city center whose management will be totally centralized.

▼ continued on p. 47

PROCESS strategic plan

K U M A S I

Institutional arrangements:

According to the SSP for Kumasi, the metropolitan assembly KMA will no longer be responsible for the direct delivery of waste management services. It will rather encourage the participation of the communities and the private sector in this domain. To carry out this change and maintain transparency in the delivery of services, an independent waste management department will be set up. Its role will be to plan and supervise waste collection and disposal undertaken by the private sector.

The department will comprise 4 divisions namely Planning, Contract Management, Pollution Control and Administration.

It will be headed by a Director of Waste Management who will be answerable to the metropolitan chief executive via the director of administration. The general policies of the department will be established by the KMA on the advice of the metropolitan authority and specialized sub-committees of the assembly. The waste management division will, as much as possible, be self-financing. It will play the role of owner of infrastructure and will be responsible for their planning, financing, construction and operation. It will not rely on budget allocations from KMA for its recurrent operations. Annual financial reports will be required as in any commercial establishment; the board of directors will be composed of representatives from KMA and members of the community.

The functions of the waste management department will include periodic review of the sanitation plan, mobilization of resources for implementation, supervision of works, contracts administration, establishment and enforcement of rules and regulations pertaining to waste disposal.

The metropolitan engineer's department could help the waste management department, upon their request, for the processing of big contracts involving construction and help in the evaluation of tender document prepared by private

consultants.

The health department will report indiscriminate disposal of wastes and violation of bye-laws relating to waste management as well as help improve the hygienic conditions of sanitary installations and undertake health education.

Sub-metropolitan districts:

The four sub divisions created by KMA will remain in charge of managing public latrines within their area of jurisdiction, however the use of these latrines will reduce considerably with the implementation of the sanitation plan.

Each sub-metropolitan district will subcontract the management of public latrines (including collection of fees) and management of refuse transfer stations to private companies or community groups.

The private sector:

The private sector will be involved in the operation and maintenance of sanitation systems and collection of user fees on top of their traditional function of construction of sanitary facilities. This will also apply to sewerage systems as well as public latrines under the care of the WMD, school latrines and neighborhood facilities upon the request of the respective sub-metropolitan district assembly.

Existing fleet of suction trucks will be leased to the private contractors who will have an option to buy. The contractors will deal directly with clients. A similar arrangement is envisaged for domestic and solid waste collection, street and drain cleansing.

Institutions, offices and industries will have to make private arrangement for the collection of their refuse. There will be a corresponding staff reduction in KMA from 900 personnel to only 30 people.

▼ continued on p. 48

PROCESS strategic plan

O U A G A D O U G O U

Institutional arrangements:

ONEA collects and administers the sanitation tax paid by water consumers (which amounts to 3 to 6% of water bill).

Before the project, the annual receipts from the sanitation tax of around FCFA 300 million was not utilized for sanitation purposes.

The SSP for Ouagadougou recommends entrusting the general responsibility of excreta as well as domestic and industrial wastewater collection and disposal to ONEA, the only institution capable of recovering costs from beneficiaries. In actual fact ONEA had included and collected sanitation taxes on water bills for several years without using it specifically for sanitation.

A sanitation division will be established within the ONEA. It will comprise of members of the project team who have gained a lot of experience during the implementation of the project.

The functions of the division will be: promotion of on-site sanitation, planning, inspection of works, operation and maintenance of sewerage systems.

The Minister of Water will be responsible for the overall planning of sanitation development and the management of wastewater.

The Minister for Environment and Tourism, in collaboration with the Minister for Health will be charged with the preparation of bye-laws and control of waste disposal in the environment.

The sanitation technical committee (comprising representatives of the ministries of Health, Environment, Water, Public Works and the City Council) will define the objectives to be attained in sanitation.

The population will be directly responsible for financing and maintenance of sanitation facilities which will be constructed by any artisan of their choice but preferably one certified by ONEA.

ONEA or its sub-contractors will offer specific technical assistance to determine the kinds of works and where they are to be cited whenever the terrain is unsuitable.

The private sector will carry out all construction of facilities: 200 masons will be trained between now and 1997, for latrine and soak pit construction. Emptying services will be undertaken by private companies approved by ONEA.

NGO's will undertake contracts with public institutions charged with management of sanitation programs.

Their role will be to provide, according to their respective strengths, sanitation services and give the necessary support to the population as well as to small companies and artisans involved in sanitation services delivery.

PROCESS strategic plan

K U M A S I

Financial arrangements:

1- Cost of the program:

Total cost of the program is estimated at 16.750 million cedis or \$16.6 million out of which 50% should be funded from external sources and the other 50% by the government of Ghana, the metropolitan authority and the beneficiaries.

2 - Financing:

The Waste Management Department will be responsible for pre-financing of the construction cost of three pilot components from already mobilized resources. External resources will be ultimately replaced by revenue collected from public latrines under private management, repayment of credits for on-site systems by beneficiaries and funds mobilized from financial institutions such as the Social Security and National Insurance Trust (SSNIT).

3- Cost recovery:

Home latrine program:

The essential principle of the SSP for Kumasi is the sharing of responsibilities amongst the metropolitan authority, private contractors and the users. Emphasis is placed on sustainability of the services.

Cost recovery and the sustained maintenance of systems is the main policy of the SSP. Contributions to be made by households was estimated from the results of the WTP survey. Households are to bear the total cost of

the facility. They will benefit from a credit scheme (with a 10% to 20% of the cost of the latrine as upfront deposit) and preferential interest rate (10% instead of the usual 30%). Repayment period will range between 2 and 3 years depending on the preference and incomes of the average household. These modalities were used only during the pilot stage to determine the rate of recovery and to

Expected investment in SSP-K for 1991 (in millions of cedis):

Sewerage System:

Repair of existing sewerage network	37
Extension of sewage network	2 553
Project preparation	174
Studies and supervision	301
Construction of treatment ponds	43

Home and public latrines:

VIP latrines	5 228
Pour flush toilets	1 351
Septic tanks	6 753
Public latrines	506
Suction trucks	252
Promotion	8

Management:

Logistics.....	72
Technical assistance	93
Training	19
Contracts	92

source: SSP-K

Financing Plan for Pilot Project (1989-1993) in millions of cedis:

Component	KMA	Gov't	UNDP
Simplified sewerage	70	50	300 (\$0,30 M)
Public latrines	10	0	100 (\$0,10 M)
Home latrines	70	0	60 (\$0,06 M)
Total	80	50	460 (\$0,46 M)

source: SSP-K

▼ continued on p. 50

Financial arrangements:

1- Total cost of the program:

The total cost of the program will be 5 700 million FCFA (\$9.5M):

- 60% will be allocated to the installation of on-site sanitation systems.
- 60% of expected investment will be made within the first three years of the plan.

home latrine construction (or 72% of the total cost of on-site sanitation systems) being 2 500 Million FCFA which is about 44% of the overall cost of the SSP-O.

External financing comes up to 1 600 Million FCFA (2,7 M \$), being 28% of the total cost of SSP-O, whereas in the case of the sewerage network, one needs 60 to 90% external financing. This will cover 81% of the costs of construction of the sewerage network and the treatment ponds.

Planned investment in SSP-O in 1991 (in millions of FCFA):	
Sewerage System:	
City sewerage network	462
Stabilization ponds	406
Industrial waste treatment	143
Studies and supervision	144
TOTAL	1 155
On-site sanitation:	
VIP latrines and soak pits	715
Pour flush latrines	1 351
Septic tanks	359
Promotion/information	210
TOTAL	2 635
School Sanitation:	
School latrines	191
Health education	28
TOTAL	218

source: SSP-O

2- Financing plan:

ONEA is expected to finance the following components :

- 17% of the cost of laying sewer lines and the stabilization ponds, and possibly the payment of an environmental premium of 2 500 FCFA per dumping to encourage the suction truck operators to use designated dumping sites.
- 28% of the on-site sanitation component, particularly the promotion and information program
- 100% of the school latrines component.

ONEA's contribution will be 1 600 Million FCFA being 28% of the overall cost of the SSP-O. Beneficiaries will finance 79% of the cost of

3- Cost recovery:

Most of the construction cost for on-site sanitation will be borne by the beneficiaries. However, ONEA will finance the total cost of the information campaigns, training workshops for masons and the promotional program for home latrines by supplying households with materials (slabs and ventilation pipes for the VIP latrines and soak pits; toilet bowls and water seal for pour-flush toilets) representing a direct subvention to the tune of 20 000 FCFA per improved latrine. These systems will be manufactured by trained private masons. The subventions represent a third of the installation cost; the remaining two-thirds required to be paid by the households (50 000 FCFA for a VIP costing 150 000 FCFA) corresponds to how much the households indicated they were willing to pay during the WTP surveys.

Modalities of payment were arrived at taking account of household expenditures ; while they gradually mobilize the necessary materials and negotiated with the artisans themselves on their charges.

The sharing of costs underlines the importance of ONEA's contribution (30% of total cost of the project) and that of users, notably households.

The average cost per household should

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evaluate the possible amount of subsidy that will be needed to continue the program.

Public facilities:

Public latrines will henceforth be managed by private contractors. They will maintain the latrines and pay 20% to 25% of the proceeds from these latrines to the Waste Management Department, which will only undertake major repairs on the latrines.

Privatization of public latrine management is already bringing a sum of 750 000 cedis in earnings to the Waste Management Department.

Sewerage system:

The beneficiaries welcome the idea of individual connections to the sewerage network (the cost is shared amongst households). A tariff will be fixed by Ghana Water and Sewerage Corporation (GWSC), as a sanitation surcharge on residents connected to both piped network and the sewerage systems (in Accra sanitation surcharge is 35% of water bills).

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not exceed its willingness to pay figure which is estimated at 1 500 FCFA/month or 60 FCFA/m³.

Financing by ONEA will be from the sanitation surtax on potable water (which, at present, yields about 300 Million FCFA/yr), according to the type of sanitary service (service rendered to users connected by sewers will be different from that of those who opt for on-site systems).

There are several ways of determining the level of the sanitation surtax:

- Separate balancing of sewerage and on-site sanitation surtaxes.
- A cross subsidization between the two surtaxes.
- Overall financial balancing of the sub sector on the basis of an acceptable amount of surtax, compatible with the people's willingness to pay and in minimizing external subsidies.

The SSP-O recommends that cost recovery from the users in the short term should cover operational cost and amortization of electro-mechanical

equipment since beneficiaries generally cannot bear the full cost of investments. This option implies the recovery on the investments related to construction of the stabilization ponds should not be borne fully by ONEA but, at best, repaid on concessional terms.

Average surtax will therefore be 52 FCFA/m³, weighted as follows:

- 93 FCFA/m³ payable by water consumers connected to the city center and industrial zone sewerage network.
- 34 FCFA/m³ payable by consumers not connected to the sewerage net-

Financial contributions of parties involved:

- ONEA will finance the cost of: 17% of the sewerage system and the stabilization pond 1 600 Million FCFA (\$2.7M) or 28% of the total cost of the SSP-O.
- Households will finance the cost of construction of on-site sanitation: 2 500 M FCFA (\$9.2m) being 44% of the total cost of SSP-O. 73% of the cost of on-site sanitation will be financed by the beneficiaries (FCFA 3.420 M).
- External financing: 1 600 M FCFA (\$2,7 M) being 43% of total cost.

source: SSP-O

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Consensus of the actors concerned:

The Situational analysis and field studies carried out helped to define the elements of the SSP-K (Strategic Sanitation Plan for Kumasi) and the selection of pilot projects in a number of neighborhoods in the city.

The SSP was developed in parallel with the implementation of the pilot project; this resulted in permanent interaction between the different partners involved.

A true dialogue was established between the institutions and community representatives, on precise issues and concrete actions.

Among the main actors were: the Ministry of Health (MOH), the Ghana Water and Sewerage Corporation (GWSC), sub-metropolitan district chairmen, district committee leaders, the metropolitan chief executive, sanitation committee members and the University of Science and Technology (UST).

The SSP document was written in stages and dwelt on specific studies, negotiations between the different actors and feedback for the pilot

project.

The complete version of the SSP was published in November 1991. This document is still provisional since the pilot project had not been completed. The flexibility of the program allows for its modification with time.

The dialogue was effective, thanks on the one hand, to the constant interaction between the project team and the communities and their representatives, the institutions involved as well as the private sector, and on the other hand, to methods employed:

- A non technical summary of the SSP, distributed to all the partners, served as a basis for discussion and reference document.
 - Training of all the partners by TNC.
 - An office within the metropolitan assembly which is open to all concerned.
 - Regular meetings are held with the different local actors.
 - Documents and reference materials are distributed to local elected leaders.
- This phase of the dialogue and interaction between the communities,

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Consensus of the actors concerned:

Following analysis of the studies, a preliminary complete version of the SSP-O was produced by the project team in 1991. Recommendations in the plan were used in a demonstration project to test the feasibility of the proposals and to polish up the contents of the plan before submitting it to the public authorities for endorsement in December 1993.

An information seminar was organized before the take-off of the demonstration project. The objective was to obtain a consensus on the proposals put forward by the SSP, particularly on the choice of technical options and the institutional aspects.

However, this dialogue did not result in a consensus and not too long after, during the implementation of the demonstration project, the project team was confronted with a fair amount of opposition from some partners who did not agree with giving all the sanitation taxes to ONEA.

"Waste water management is within the framework of our responsibilities. ONEA must just concern itself with

storm water management...sanitation taxes should be equally allocated to other components of sanitation."

G.Yoda-DESA.

But the project team justifies their role:

"ONEA is the only organization capable of managing the sanitation tax. It has an independent accounting system which allows quicker financial transactions (monies do not go through the public treasury for redistribution) and therefore can be responsible for the management of wastewater, using all the taxes collected for this purpose....other source of financing should be found by each institution for the other aspects of sanitation."

A. Koné - Project Manager, ONEA.

During the final phase of the pilot project, the government resolved to create a National Sanitation Fund from taxes which until now were collected by ONEA and other unspecified resources: the use to which these funds would be put were not specified.

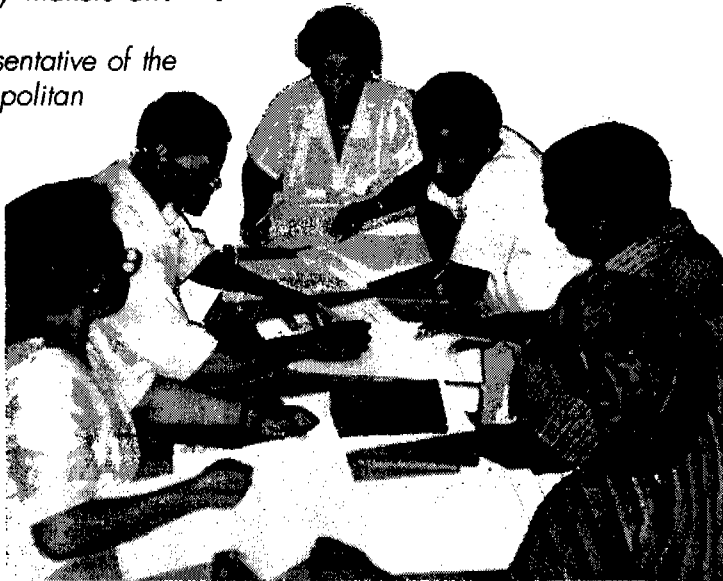
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authorities, experts and specialist organizations resulted in discussions and subsequent modifications of different aspects of the SSP and the pilot project.

"A lot of meetings were held with the project team during which most of the problems that we face in the Manhyia sub-district were put before the team. The project co-ordinator was very helpful during the definition of policies and actions...There were always interesting debates during sanitation workshops and we are very interested in continuing with such debates which serve to introduce us to new ideas, and broaden our minds...We will in the process develop the capacity to play our role between the policy makers and the people."

Mr M. Sanni representative of the Manhyia sub metropolitan district.



A working group meeting

The dialogue:

Local leaders and assemblymen were initially opposed to private management of public latrines. However, several meetings organized between the project team and the representatives to thrush out these differences resulted in a consensus in the long run :

The project coordinator asked them to suggest a sanitation plan for their neighborhoods (improvements, sources of finance, management,....). They finally accepted the need for private management, on condition that they received a percentage of the proceeds from the latrines . This solution was adopted; each sub-district receives 25% of the net revenue from private companies managing the public latrines.

Experience has shown that, writing down, recording or filming of the remarks of the different partners, is useful means of later confronting them with their own commitments.

Food for thought:

• Despite the policy of dialogue taken by the project team and their attempt to involve all the partners, the "Town and Country Planning Department", which is responsible for the development of settlement plans does not seem to have integrated the principles and orientation of the SSP in its plans.

Knowing that it will be utopian to create an effective partnership with all the actors concerned, how do we still foster agreement and consensus on the contributions and commitment of everyone?

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A true dialogue pre-supposes that each makes some concessions and places greater interest on long term benefits to the community as against short term gains.

It is however certain that if these funds were redistributed and used in other areas of sanitation, the operation of the SSP-O, based on an explicit financial mechanism, will have to be revisited. Besides disagreements between the various institutions concerning the sanitation taxes, certain community leaders also complained of not having been consulted during the preparation of the SSP, a situation which resulted in a withdrawal of their cooperation in the program.

"Local councils should be involved from the very beginning of the project. In order to send a good message to the people, we must understand the project thoroughly. We have a lot of problems with amenities in our communities and representatives from the communities always come to solicit help from us. We are not capable of any intervention since we are not financially independent but we can play the role of advisors".

*The Madame Mayor
of Boumiogou*

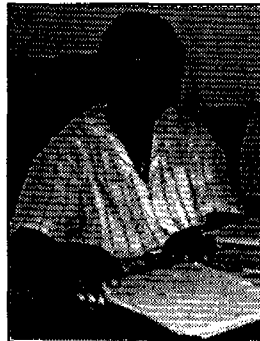
"They came to see us with an already prepared project. Our role was limited to making the people accept the project. We were asked to take part in the implementation of policies but not in their definition from the start. For example,

they have betted on a very large demand for improved facilities, whereas we know that most families do not have the means but want to live anyway...I have proposed that public latrines are considered for those who do not have the means since a great number of people defecate in the street drains and I cannot stop them unless there is a law to that effect and a tangible solution is offered, if not I will have the people on my back...The project could also link up their activities with the ministry of Health to help change the everyday habits of the people".

Administrative official sector 2

The sanitation project first and foremost concerns the city. It is based on the policies of community and local councils. We were not involved from the beginning. It was only on the 9th of February 1993 when a seminar organized by ONEA informed us of our various roles. According to their proposals, we were charged with the enforcement of bye-laws. I do not have any idea of the whole project and feel more or less ignored. We must create a working group on sanitation control".

*Director of technical service
in the economic division*

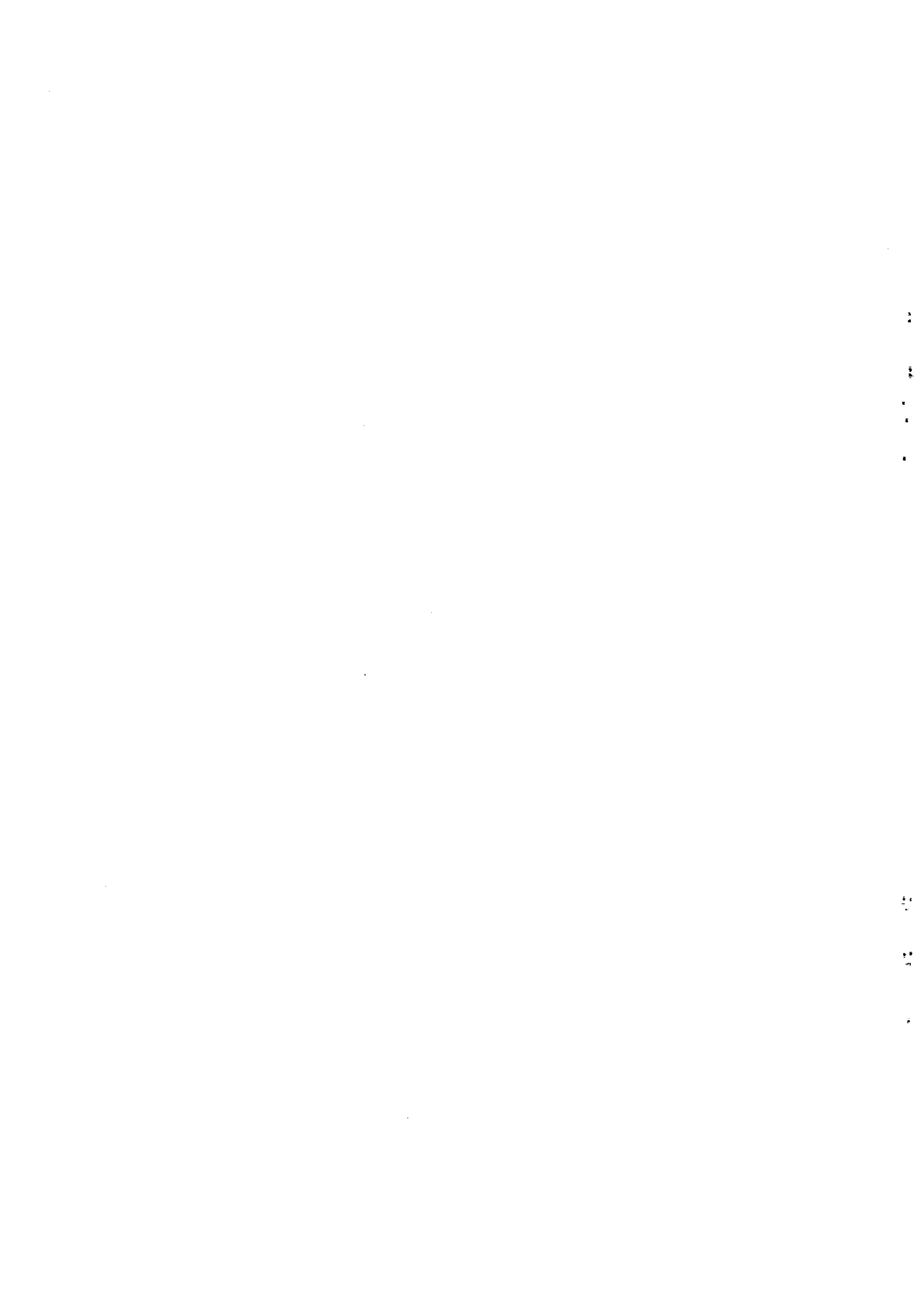


Food for thought:

• In the context of a centralized environment which we still encounter in most cases, what measures should be taken to arrive at a consensus with all the actors concerned on the objectives of the project and sharing of roles? Since it is necessary to intervene in all aspects of sanitation, and knowing that centralization of public revenue is riddled with problems of funds redistribution, how can we establish an efficient financial mechanism without running into conflicts with the different institutions concerned?

• Taking cognizance of the fact that sanitation policies offer a potential for developing a partnership (might involve merging a number of decision making levels), what measures should be proposed to get the authorities and institutions involved to work more closely?

What mechanisms should be adopted to ensure regular consultation and avoid apathy during the implementation?



Pilot projects

The implementation phase is not the only stage for participation. Participation actually begins in the initial phase of the project. It is here that the rights and responsibilities of each actor is laid out.

Pilot projects, undertaken within defined boundaries, contribute to a better scrutiny of the results and the direct impact of the SSP. In both cases, aspects of the SSP were implemented in order to assess their feasibility, for purposes of refining the contents of the Plan. This last phase of implementation can be considered in both cases as the time for dialogue, consultation and working together at the community and local levels.

Whereas in Kumasi actions were based on the process of dialogue within an existing decentralized organization, in Ouagadougou innovative approaches were formulated to generate a greater involvement of the communities. These actions succeeded due to the active participation of the local people who were virtually side-lined during the planning period.

In both cases, dialogue between the private and public sectors was productive and left both parties satisfied.

The main goal of the pilot project is:

- To test the feasibility of technical options, institutional and financial proposals and modify them according to lessons evolving from the implementation of the pilot project.
- To determine the viability of the strategic options concerning the role of community participation in identifying priorities, planning community improvement projects, management and maintenance of infrastructure and equipment.
- To examine the rationale of institutional recommendations, particularly those defining the roles and functions of the different actors involved in the implementation of national policies (the national committee and the municipal services, planning units in the ministries, private companies and artisans, district committees, beneficiaries and NGO's).

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Pilot projects

Objectives:

The pilot project was set up alongside the development of the strategic plan to:

- Practically assess the feasibility of the different technical solutions.
- Examine the operation of the newly formed Waste Management Division (WMD).
- Emphasize the need for collaboration between the Training Network Center (TNC) of the University of Science and Technology and the city's technical departments.
- Evaluate effective demand of the population for improved sanitation and assess their capacity to contribute financially to the program.
- Propose the financial arrangements for the continuation of the program.

Selection of pilot project areas:

Since the pilot project had three different components namely: public latrines, simplified sewerage network and on-site sanitation, three different sites were selected:

- The central business district for public latrines.
- A high density tenement area for the simplified sewerage network
- Three indigenous residential areas for the on-site sanitation. One of these areas was an average income residential area and the other two were low income areas.



Regular field visits to pilot project areas

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Pilot projects

Objectives:

To promote on-site sanitation in Ouagadougou based on the development of local demand:

The project focused on the demand stimulation for improved sanitation systems for waste water and excreta in sectors 2 and 16, supported by animation, social marketing and the meeting of the demand by making available specially trained masons as well as supplying the households with part of the materials for constructing improved latrines (toilet slabs, ventilation pipes, bowls and water seals).

1- To develop materials and techniques and to document a methodology designed to inform and educate the population.

2- To support the construction of twin pit VIP latrines and pour-flush systems, soak pits for seepage and rehabilitation of existing facilities demanded by the people and at reduced costs.

3- To develop the support arrangements and training program for

artisans involved in the construction of the facilities.

4- Foster collaboration between public sector institutions charged with sanitation, the private sector and the population.

Selection of pilot project areas:

In order to compare the reactions of the people to new technologies, two sectors were chosen based on results of WTP studies conducted:

• Sector 2, situated in the center of the city. It is an old district with a homogenous population. It also has a very strong traditional social organization. (20 000 inhabitants).

• Sector 16, located in the peripheral zone of the city. It is a relatively new district which sprung up after the development of the newly planned residential areas during the revolutionary era (1985-86). It has a very heterogeneous population (40 000 inhabitants).

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Component 1: Home latrine Program

Organization of field work's project team:

Members of the project team decided to undertake the initial field work together in order to maximize the use of their various abilities. This also allowed all of them to imbibe the realities on the site, negotiate with different actors and to approach problems from different angles.

Community Sanitation Committees:

To promote the program and to solicit the interest of the people in proposed facilities, sanitation committees were established in the pilot areas.

Alongside the project team's information sessions and house to house visits in the pilot sites, the sanitation committees sensitized the people in their areas to the problems of poor sanitation and encouraged them to build VIP latrines on their plots.

Committee members, chosen from already existing groups in the areas, were selected on the following criteria:

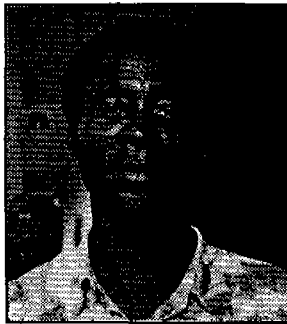
- Their availability.
- Willingness to be of service to the community.
- Being a member of a recognized group in the community.
- One who commands respect in the community.

The roles of the committees were :

- To sensitize households on the advantages of the sanitation facilities proposed and help them to plan for possible investment in improved sanitation.
- To sign a contract for a loan with the beneficiaries and open a file for each one.

- To collect monthly repayment instalments.
- To provide feed back to the project team on progress of activities.

"We initially contacted the local assemblyman and chiefs of the areas who in turn organized meetings with their communities. Members of a sanitation committee were selected by consensus and not by voting. We were at the selection meetings of every pilot project area, but did not interfere in the deliberations; We were only there to present the philosophy behind the project and define the profiles of persons who could assist the project within the community. We then left the committee to carry on with its work".



*Tony Mensah -
Project team member*



Training session for sanitation committee.

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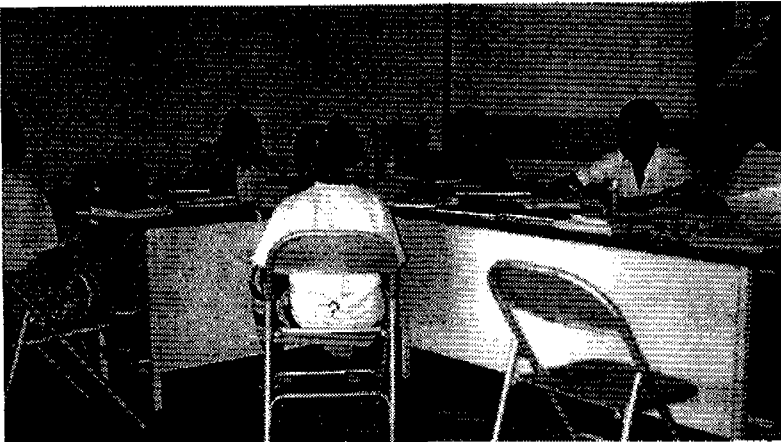
Organization of field work

Extension team:

After analyzing the track records of NGO's within the umbrella of the coordinating office of NGO's (BSONG), ADRA was selected to undertake the job of animation.

It was observed that despite the large presence of NGO's in Burkina Faso, their involvement in the domain of sanitation was very limited.

ADRA was the only NGO with any experience in animation for sanitation. It had participated in the construction of traditional latrines and soak pits in rural districts of the Bazega province.



Headquarters of animators in Sector 16

"ADRA is the only NGO with experience in sanitation projects; the manager of the group expressed a lot of interest to collaborate with us. It was also the lowest bidder for the job..."

Felix Zabsonre -
Project team member.

The animation team comprised of 7 animators and 2 supervisors, headed by the project team sociologist.

During the second year, an office was chosen in sector 16 to allow animators to meet there and also serve as a local meeting room and an information center.

Training of animators:

The animators underwent a training course using GRAAP participatory techniques based on the principle of presenting the problem and, together, finding solutions to the problem.

This method is based on visual images (graphical illustrations, pictures,...), appropriate for the illiterate population.

The different phases of the animators' training program are:

- The use of GRAAP learning games to solve sanitation problems and questions.
- Pre-testing of GRAAP communication techniques.
- Training by an external consultant.



Type of visual aid employed by the GRAAP method

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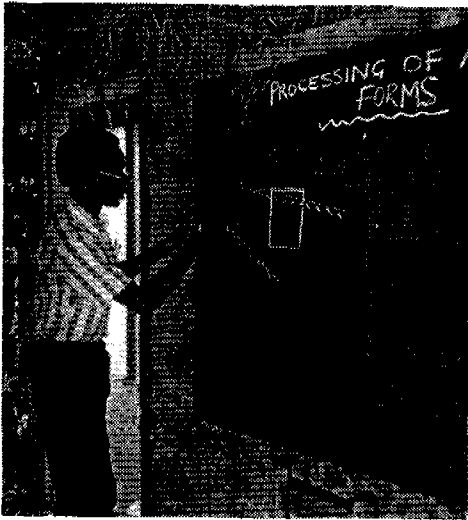
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"The sanitation committee was set up in 1990. Before then I was a member of the CDR. The area chief was initially interested in the project but when he realized that there were no financial gains from it, he retreated. Now there are only two of us which is not enough. We have a problem with completing all the tasks that are assigned to us. There is a need for restructuring.

...Families usually have lots of difficulty with their monthly payments: sometimes landlords who collect monies from the tenants do not hand over these moneys to us immediately; other times too it's the tenants who do not all pay up and the landlord cannot also make good the outstanding balance.

...Rents for old tenants have not changed since the facilities were installed in the houses, however, new tenants are made to pay more."

Mr. Isaac Kofi Bimpa



Scene at a training session

"Our committee has been in existence since 1989. I met the 14 chiefs in the area and informed them about the impending project during a meeting with them.

The chiefs in turn summoned all the inhabitants and asked them to

participate fully in the project, stating that it was in their best interest.

The residents did not initially agree with the project since they were illegal settlers and therefore feared that their buildings would be demolished or that they would be driven off the site rendering their investment useless. We reassured them that if they constructed the latrines, they faced a much lesser risk of ejection.

...I collect monthly payments from each household head. There are a lot of people who cannot pay on time.

Regularly paying house-to-house visits to collect monies from the residents gave us the opportunity to see their problems and advise them.

We encounter technical problems too, for example during the rainy season, the pits fill up faster; sometimes emitting unpleasant odors and sometimes too the second pit fills up before the first one has had time to decompose...We take note of all these problems and inform the community development specialist of the WMD.

Mr. Isaac Agyemang -
Moshie Zongo

The committees reserve 2% of revenue collected to cover operational costs. This amount is obviously insufficient for the efficient running of activities and community development projects.

Area chiefs:

The chief of the area is the principle link between the metropolitan assembly and the community. His role is to inform the community, encourage them to participate in the activities and sensitize the people on the importance of future activities.

"I have asked the communities to make an effort to construct latrines in their homes. I have also talked to

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The animation process:

The work of the animators essentially consisted of informing the inhabitants and their representatives about the project, identify people interested in the project, link up the interested households to artisans, ensure that the facility is delivered and act as a permanent advisory group for the use and maintenance of the systems installed.

A work plan was drawn up for all the activities over a period of two years, broken down into a quarterly program which was further sub-divided into weekly schedules.

A break down of each zone into 600 plots (2 zones in sector 2 and 5 zones in sector 16) defined the areas of jurisdiction of each animator.

Phase 1: Getting to know the area.

- Identify existing associations in the zones and their degree of participation.
- Identify the artisans.
- Identify leaders and influential personalities, liable to participate in and help advance the project.
- Identify public spaces and possible places for meetings and rallies.
- Carry out in-depth surveys on households, their sanitary installations, desired changes and their level of commitment.

Phase 2: Information campaign.

- Meetings to give information and present the project.
- Presentation of GRAAP posters (illustrate the problems of the area and what can be done to resolve them).
- Presentation of wooden demonstration models.

Phase 3: Implementation.

- Visit to households to ascertain if they are ready for construction works.
- Ordering of pre-fabricated components at subsidized prices.
- Introduction of artisans and applicants.
- Follow-up of to the building sites to supervise works.

Phase 4: Evaluation and Monitoring.

- Evaluation of the level of maintenance of installations and sensitization of households on the use and maintenance of the latrines (conduct a survey on the level of satisfaction with the installations, record of use, record of follow-up of construction works,...)
- Encourage the new beneficiaries to keep their facilities clean.
- Evaluation of appreciation of the project by the leaders and influential people.

It was observed that only 12% of the latrines constructed were not well maintained by their users.

Food for thought:

- Initially, the animators had a passive attitude towards the project. They were only following the instructions of the project team and not too conscious of their role as animators. How can we develop real partnership with the NGO's charged with animation, and how can we stimulate the initiatives and adherence to new approaches on the part of animators ?
- In an approach of this nature, how can the animators remain responsive to the demand and

to problems being stirred up (outside the project) by the people ?

- In not reaching an agreement in principle with DESA, the hygiene education component of the project was underplayed during the pilot phase. Even if, according to the project team, this had no negative implications on the results of the project, can one really envisage promotion of improved sanitation without referring to health and hygiene education ?

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them about the dangers of cholera, dysentery, and other diseases that they will suffer if the sanitary conditions in the community is not improved. The people accepted the challenge, it was rather progressive. Initially 5 people volunteered to have improved latrines constructed in their homes, then it increased to 10 people and so on. I have myself constructed a latrine in my house to serve as an example. I have also used economic arguments to convince them that it is was a good opportunity to install a home latrine now because of the negotiated lower price. ...Some people who neither have any title to the land nor permits to build on them, are still encouraged to build a latrine because they are aware that they will not be ejected, and the construction of latrines will even give them security to the land."

Chief of Moshie Zongo

Animation tools:

The sanitation committees and the project team utilized graphical representations and audio visual aids to sensitize the communities on sanitation problems. They used already constructed latrines for demonstrations and organized outdoor ceremonies during the opening of new latrines.

"To facilitate hygiene education, a



Daily consultations with the community chief

group composed of 20 very influential women in the area was formed in 1991. It is always very difficult to get the women involved, especially amongst the Muslims; but in showing films and having theater performances, we had a good chance of attracting them."

Land title is not the only security for inhabitants when you have confidence in your chief.

At Moshie Zongo the fact that one does not have title to land did not prevent the inhabitants from investing in home latrines.



Dancing and animation

Food for thought:

- The sanitation committee members are sometimes too involved in the daily activities of the neighborhood to effectively carry out their role of financial mediators without the risk of creating ambiguities between the community and other local associations.

Isn't it necessary to find more neutral people to act as financial mediators ?

- The system of financing based on the credit system should probably be changed during the

second phase of the project due to difficulties in its management. However, the monthly payments allowed the sanitation committees and the project team to automatically follow the beneficiary households and to ensure good operation and maintenance of latrine installed during the early stages of the project.

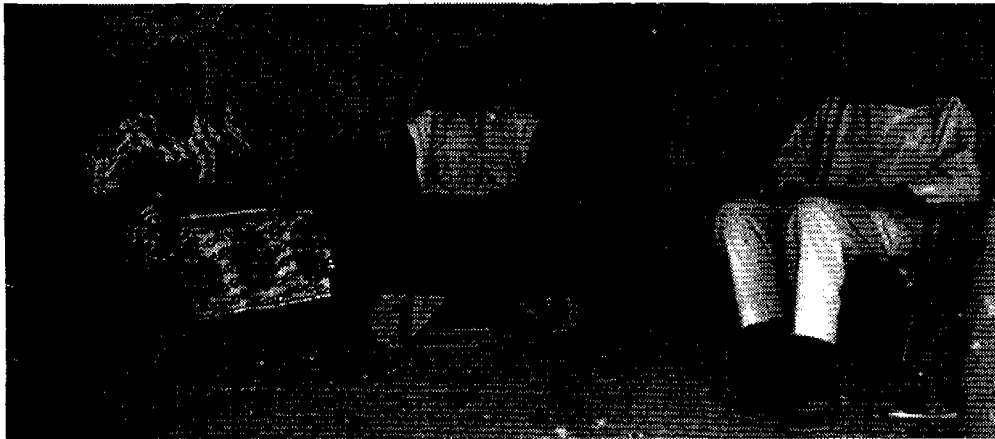
If the repayment methods are changed, what tools should be put in place to ensure continuity and regular contact with the beneficiaries concerned ?

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Large scale information diffusion, social marketing:

Information:

To stimulate demand and reach a large majority of people in the city, a mix of modern communication tools (radio, television) and traditional communication networks (district meeting and ceremonies...) were utilized by the project team.



Meeting with neighborhood chiefs

A survey carried out during the use of commercials showed that 48% of the population of Bobo-Dioulasso heard about improved latrines from radio and television advertisements.

Results of the media survey:
Radio and television sets are very common in most households; Almost all households interviewed (91%) possessed at least one of these systems and more than half of all the households (54.5%) at least had a radio. Radio is by far the average means of information and listening in is the favorite past-time (86%) of those who possess at least one audio-visual system as against 36% who prefer the television. Those who do not have either of the two (9%), listen to the radio at their neighbors houses preferably in the mornings and only 27% watch television at their neighbor's.

Radio et TV:

A survey on the media was conducted on 210 households in order to estimate the number of people expected to be reached and to choose peak listening hours:

- To ascertain the level of exposure to audiovisual media.

- To select which media to use for the social marketing campaign.

- To subsequently measure the impact of the campaign.

Following the survey, different tools were developed, with more preference given to promotional language rather than moralistic promotional speeches usually used in development projects:

- A 45 seconds TV commercial.

- A radio commercial.

- Sponsored radio broadcasts.

- Debate broadcasts: This consisted of live telecast on radio, involving personalities from the areas where home latrines have been constructed and radio debates on sanitation systems.

The Newspapers:

Several articles were published in the dailies and weeklies:

- Illustrated articles on beneficiary households.

- Reports of site visits by important personalities.

Recreational activities:

After three months of preparation with the entertainment committee, composed of representatives from the various sectors and resource persons, a program of competitions and performances of dance groups and theater troupes was launched:

- The dancing troupes of sector 2

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Mrs. Jemima Denis-Antwi, Head of health education division (MOH).

Implementation:

Contract documents were signed between the project team and small private construction companies (for a minimum of 5 and a maximum of 10 latrines): Large companies did not respond to the tenders due to their lack of interest in such small scale business.

Artisans were trained on-the-job by the project engineer from WMD ; Regular site supervision of the various levels of construction reduced the risks of construction errors which were not easily visible :

- After the excavation of the pits.
- The foundations.
- The installation of the ventilation pipes.
- Finishes.

The companies are paid in instalments; this process is cumbersome for management purposes but it guarantees good quality of the work provided. Technical difficulties encountered included:

- Occasional wrong dimensioning of slabs.
- High level of ground water.
- Poor quality masonry works.
- Wrong dimensioning of pits and of ventilation pipes.

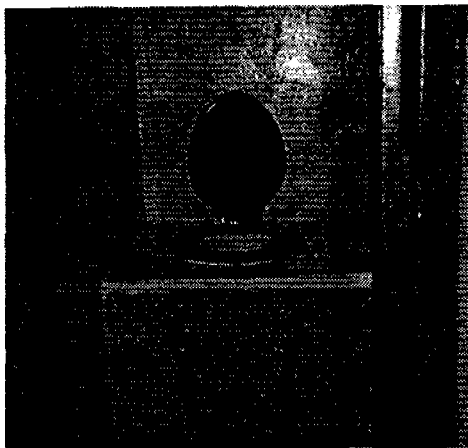
Handing over of facility:

At the end of the works, the artisans are paid off by the WMD. A formal commissioning ceremony is organized for a batch of constructed latrines to:

- Furnish the beneficiaries with a statement of cost and monthly installment payment.
- Educate the users



Setting out of latrines



Latrine decorated by its owner

Contents of booklet:

- Initial payments by households.
- Cost of construction.
- Remaining balance.
- The remaining balance with interest to be paid over 2-3 years, as the case may be.



Tape-cutting ceremony to inaugurate latrines in Kumasi.

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performed in the compounds of several traditional leaders in the sector and also at a dedicated public place in sector 16.

• Seven football matches were organized between eight teams. The finals of the "ONEA Sanitation Cup" between the champions of the two sectors took place at the Provincial sports stadium before a large number of spectators.

During this event, certificates for the artisans who had undergone training were presented to them, by officials of ONEA.

The theater troupe gave six performances, two of which took place in sector 2, and were based on the theme

of the project. A full-size model of a VIP latrine was exhibited during the performance. Each presentation was preceded by a dance session to "charge up" the atmosphere. The performances were extremely appreciated by the people; there were about 300 spectators during each performance.

Even though the organization of these recreational activities re-

quired intensive preparation and management, it paved the way for dialogue with various associations and resource persons in the area.

Guided tours:

About 100 guided tours were organized in the two sectors, by the end of the first year. It allowed people who were motivated but nonetheless hesitant, to decide to start construction on their plots. Household heads were invited by the animators to visit the home of someone with a completed latrine. Explanations on the different stages of construction, the cost and the operation performance of the latrines were practically demonstrated by the host household.

These visits contributed to changes in the attitudes of the visiting households, through the direct interactions established between inhabitants of the sector. This relationship further boosted the trust of the visitors and encouraged them to decide to initiate the construction of their own latrines.

The animators sometimes had difficulties in organizing visits (times were unsuitable for household heads, problems of transportation ...), but these actions quickly paid off: following these visits no household head declined the construction of his own home latrines.



Visiting a neighbor's new latrine.

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on problems of poor hygiene, upkeep and maintenance of the latrines.

This ceremony is occasionally accompanied by speeches from different personalities, music, traditional drumming and dancing to commission the facilities and congratulate the beneficiaries.

Financing:

Beneficiaries pay 10% or 20% of the total cost at the beginning of construc-

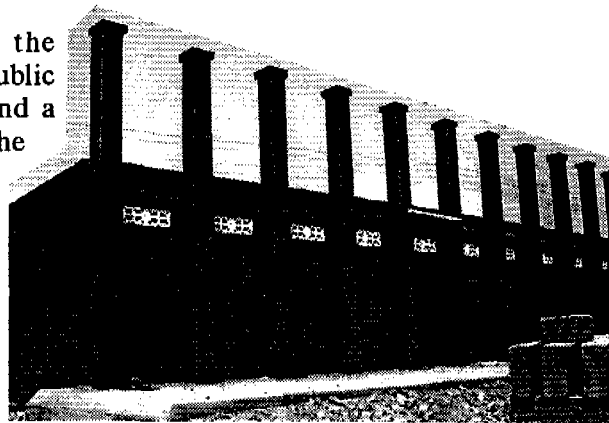
tion. The balance, depending on the financial standing of the beneficiary, is spread over 2 or 3 years at an annual social interest of 10% instead of the usual commercial rate of 30%.

Total costs of the alternating VIP latrines ranged from 120 000 cedis to 400 000 cedis, depending on the number of cabins and the quality of the superstructure. With single pit latrines, annual costs for evacuation should also be added.

Component 2: Public Latrines

The long term objective of the strategic plan is to replace all public latrines with home latrines and a sewerage network, except in the commercial and business districts of this city.

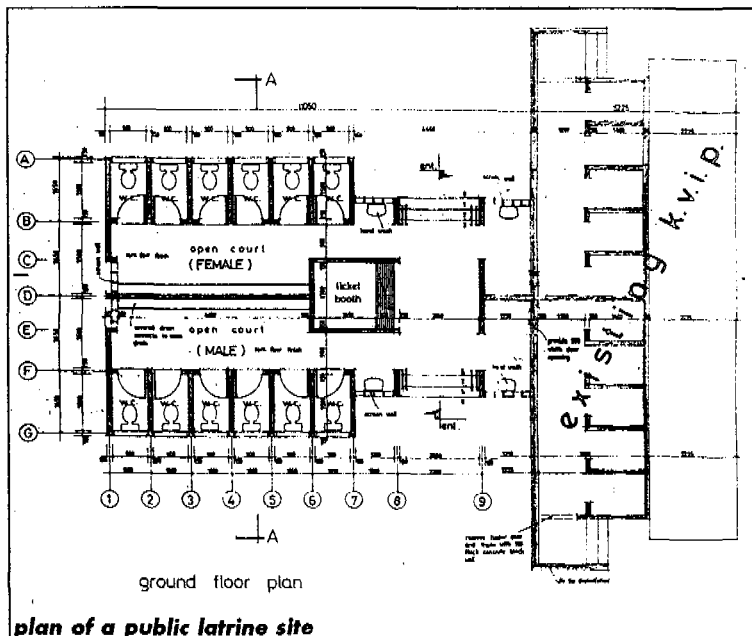
Meanwhile, the metropolitan assembly has decided to turn over the 400 neighborhood public latrines to private and community management and construct 4 more in the central business district of the city.



Latrines in the Central Business District

Private management:

Before the project, the metropolitan assembly spent 800 000 cedis per month on the upkeep (maintenance, desludging, repairs, personnel costs) of 12 sites in the central business district and not including the cost of the CDR's and community leaders who managed the city latrines. With privatization of the latrines, the metropolitan assembly in addition to saving 800 000 cedis and not being burdened with maintenance of the latrines, receives over 750 000 cedis per month as surtax from the private contractors. This



▼ continued on p. 70

Implementation:

Objectives :

- To arouse the interest of the private sector in the project by offering them profitable business opportunities (financial viability).
- To train artisans to ensure good quality of constructed facilities (technical viability).

50% of the artisans are operating at 100% capacity after their training, 25% operate part time and 25% have disappeared..."

Jules Ouedraogo -
Project team technician.

Training of artisans:

All artisans in the two sectors were registered and some of them selected by the animators to undergo training following an inquiry into their reputation in the area.

Training was carried out by CREPA and the project team in two phases: theory and practical.

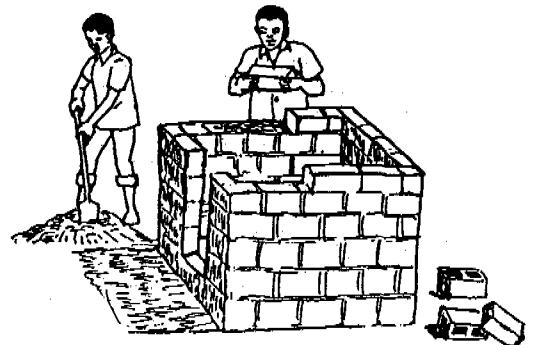
The 3 day theoretical phase involved instructions in construction techniques using audio-visual aids, models and plans.

The practical phase was through on-the-job training of the artisans on the plots of volunteers. Two types of artisans were trained: those who manufacture components parts (slabs and blocks) and the builders.



Construction of a double pit latrine.

"We chose level 4 artisans, neither too big nor too small; those who could construct houses that utilize 20 to 40 roofing sheets. Advantage was given to those who were out of work but already had some experience. We had to target the selection. A total of 57 artisans were trained and only 50% are still in operation today. After the first series of training it was realized that 2/3 of the artisans had abandoned the project and so we improved our training methods. At the moment



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amount was agreed upon with the private contractors, taking the revenue they received into consideration.

Henceforth, the role of the metropolitan assembly is to supervise the operations of private contractors to ensure:

- Cleanliness and maintenance of facilities in their care.
- Make sure that user charges are not arbitrarily increased.

The assembly will only intervene in the execution of necessary major repairs.

"Our company has undertaken emptying services and management of public latrines since 1991. We manage three public latrines in the city center and 15 others in the sub districts; We employ about 80 people.

I am very pleased with this arrangement. We charge 10 cedis per visit for the vault latrines and 20 or 30 cedis per visit for the VIP latrines and WC respectively. The city authorities collect 25% of our revenue as taxes and monitor our work; Sanitary inspectors come to inspect the sites almost everyday.

Upon signing the contract, we paid a warranty to prove that our company was credible and serious."

*Mr. Albert Mensah
Managing Director -
Albert Joseph & Co. Ltd*

Implementation:

Three new sites were re-constructed or rehabilitated by a private construction firm under the supervision of the project team.

Contracts between the public and the private sector:

The metropolitan assembly and the sub-metropolitan councils invited bids for the management of public latrines.

Selection procedure for private contractors :

- Pre-selection of companies by the sub-metropolitan council based on their declared competence and standing.
- Officials of the Waste Management Department (WMD) evaluate the bids and recommend the contractors for selection .
- The sub metropolitan council makes the final decision and signs a contract with the chosen contractor.
- The WMD endorses the contract.
- The sub-metropolitan assembly formally informs the metropolitan assembly.

If an elected member of the assembly puts in a bid, he cannot take part during the selection procedure in his capacity as an assembly member.



Public latrine sites also serve as recreational grounds

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Construction works:

Households are obliged to use artisans trained by ONEA in order to benefit from the material subsidy.

The artisans advise the households on the siting of latrines, type of materials to use, the expected cost, etc...He can only start construction when the households have assembled all the necessary materials. Once the materials have been assembled and the pit has been dug by the households, they are then given the go ahead to collect the pre-fabricated slabs.



Inside of a tiled pour-flush toilet

"This is promotion of private initiative; the people are free to choose their own artisans and negotiate the prices with them directly.

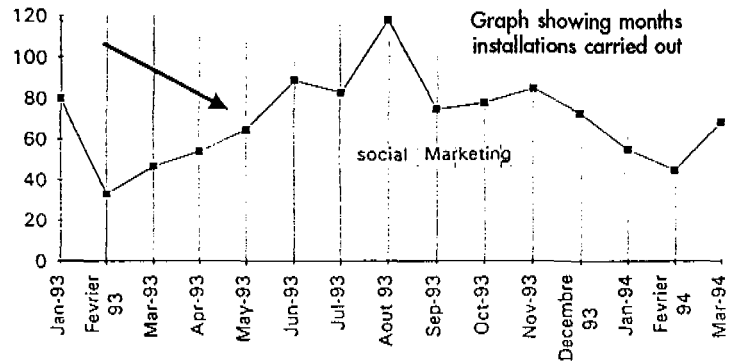
Artisans were chosen from the same area as the households.

It is hoped that this familiarity with the households will promote trust and simplify matters."

Felix Zabsonre -
project sociologist

Artisans have to adhere to the stated dimensions and use good quality materials, make sure the latrines are not sited near water sources, pay attention to wind direction and determine the soil's water absorbing capacity. They must be able to make the necessary choices to reduce costs for the households.

The animator provides a quotation for the latrine type chosen by the household. The latter has to assemble all the necessary materials for the construction of the pit and the superstructure on the plot. A suitable day should also be set aside to meet the animator and the artisan.



source:
final project report 1994

Remarks:

The artisan selection procedure was redefined during the pilot project when it was realized that about half of them rapidly abandoned the project after their training. Training is now targeted to small scale entrepreneurs at the verge of completing a job or looking for new jobs.

Food for thought:

- The construction of latrines in both sectors generated more than 20 new employment positions for artisans. Generally, some attitudes towards the project were however difficult to overcome: the masons were not commercially oriented and depended too much on the project organizers; it took a long time for them to understand that they had to generate demand and create a market for themselves.

How can we introduce a project that will reinforce dynamism, instead of promoting inertia and dependency?

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Financing:

The public latrines in the 3 CBD sites were built with project funds but all other constructions and rehabilitation works may be financed :

In the short term, by the Social Security and National Insurance Trust (10 public latrines). In the long term, by revenues collected from private contractors (18 public latrines).

"Generally people prefer the WC to VIP latrines, since it uses water and it's more comfortable. VIP's cost 20 cedis per visit whereas the WC cost 30 cedis. I am paid 24 000 cedis and I work from 5 O'clock in the morning to 9 O'clock in the evening... We have a lot of problems with the plumbing works, which need to be regularly repaired".

Public latrine overseer

Financial contribution from the private sector:

At present, the management of about 280 public facilities has been turned over to the private sector. They are required to pay to the metropolitan assembly or the sub-district councils between 20% to 25% of their net revenues as surtaxes on their operations.

Food for Thought:

Privatization is still a controversial issue. Some assembly members and other influential people in the districts think the private contractors make too much money, when it's the duty of the local authorities to manage public utilities.

- Can the Waste Management Department (WMD) in the long term, control the tariffs for the use of public latrines while they are being privately managed, and protect the people from paying extremely high fees ?

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Financing:

The households were charged with mobilizing the necessary materials, upon the advice of the mason and between them, negotiate the charges for construction works.

**Households
contributed 75%
of the total cost
of facilities.**

"To pay for materials and the cost of construction, I used my savings from the sale of local beer made from millet. I had the blocks made at home. I constructed a VIP and one month later had a soak-pit. It all cost me 74 000 FCFA and the toilet slabs and ventilation pipes were given to me free of charge. The VIP took 10 days to construct and labour costs came up to 8 000 FCFA."

Madam Damba - sector 2

"There are people who would like to build home latrines but do not have the means. They need some time to accumulate the money. I have myself constructed a latrine in my house to serve as an example to other people. It took me three months to buy the materials for a VIP, a sho-

wer and soak pit. The total cost was 106 950 FCFA. It took 20 days to build".

*Mr Poe NABA,
traditional chief of sector 2*

"It was with the help of the animator that I could build my latrine; she really worked very hard, coming here several times at her own cost just to help us..".

resident of sector 2

".... This cost me much more than I bargained for, but now I am very happy and proud and show it off to my neighbors... When they ask how me how much it cost me, I tell them it's not expensive, in order to encourage them to start building. Once they get started, it will be difficult for them to stop and so they will make every effort to find money to complete the facility".

An influential person in sector 2



Double pit VIP latrine

Food for Thought:

- It can be said that the total involvement of some of the animators in the social activities of the people (such as at funerals, marriages and out-dooring ceremonies) made it easier for them to promote the

construction of latrines. Will this type of motivation not be difficult to reproduce on a large scale ?

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Component 3: Simplified Sewerage Scheme

Since the simplified sewerage system was not common in Ghana, its advantages and disadvantages will have to be assessed during the pilot project stage. It is being implemented on a pilot site which was chosen on the basis of the following criteria:

- Settlement characteristics: high rise buildings with very little space around them and therefore not suitable for the construction of VIP latrines or septic tanks.
- Availability of sites for building stabilization ponds.
- The topography of the land: sloping terrain which is suitable for gravity flow.
- Socio-economic conditions: income levels of beneficiaries not too low.
- Houses have connections to the piped water network.
- Preference of households for this system.

In order to explicitly define this pilot area, a financial survey by Mr Owusu-Akyaw and Dr. Akosa (1991) proved very useful. A member of the project team also paid a working visit to Brazil to observe a similar system being operated in Sao-Paulo.



A surgical operation in between the blocks

Local extension activities:

To a large extent animation work in the community was carried out by the project team. Their role was:

- To collaborate with consultants and implementing agencies on technical issues.
- To meet the families concerned, inform them about the project and solicit their participation.
- To manage the budget.
- To coordinate all activities.

Just as was the case in on-site sanitation, a lot of meetings were organized with representatives from the sub-metropolitan assembly, the chief and elders of the area.

The preliminary design of the network, pictures and explanatory diagrams served as a good basis for discussions.

A sanitation committee was formed in the area to sensitize the households on the construction works and money collection, and the time frame for the recovery of costs for individual connections to the network.

Participatory aspects:

The implementation of the simplified sewerage network will require the acceptance and cooperation of households. In fact, it is not only a question of laying the sewer along the streets, but more or less the "surgical operation" within housing blocks and groups of plots.

On the other hand, the cost of house connections to the collector sewers will be borne entirely by the households.

Dialogue and social interaction must become an important component of the project in order to guarantee its success since the system is absolutely new in Ghana or any of the neighboring countries.

Implementation of the simplified sewerage network requires the cooperation of inhabitants.

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Annex:

Financial statement of constructed facilities

Rehabilitation Works for Mr ZOUNGRANA Prosper - Construction of unlined soakaway pit - Construction of washing basin - Repair of bathroom and toilet - Repair of roof			
VIP CONSTRUCTED Mr ZOUNGRANA Mahamoudou Unlined pit (3 layer of bricks) Depth: 2.00 m Interior dimensions of pit: 2.50 m * 0.65 m Duration: 06/10/92 to 21/10/92			
ITEM	QUANTITY	UNIT PRICE (FCFA)	AMOUNT (FCFA)
Excavation		FIXED PRICE	6 000
15cm wide blocks	132	100	13 200
Clay blocks (produced by his children)	165	10	1 650
Cement	4,5	2 400	11 200
Sand	3 loads by push trucks	1 000	3 000
Gravel	2 loads by push trucks	1 000	2 000
Door	1		2 250
Roof (used sheets)	3	1 000	3 000
Rafters	3 ml	500	1 500
Nails	12	15	180
Iron rods	4	150	600
Vent blocks	28	100	2 800
Screen	1 m ²	1 300	1 300
Transportation of slabs		FIXED PRICE	1 000
Slabs		FIXED PRICE	18 350
Labor			10 000
TOTAL cost of VIP			78 000
TOTAL expenses of landlord			42 800

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"My role in this project was to chair area meetings concerning the construction of this sewerage scheme at Asafo and act as an intermediary between the local representatives and metropolitan assembly.

We had a lot of discussions with the project team, usually meeting once a day. This allowed us to focus on the different aspects of the operation, which when emphasized, would transform the outlook of the area."

Mr. Ampofo Addai
Chairman,
Subin sub-metropolitan district.

Implementation:

Contract with private contractors:

Tenders for the job were announced and a company which had already constructed a similar system in Accra was awarded the contract.

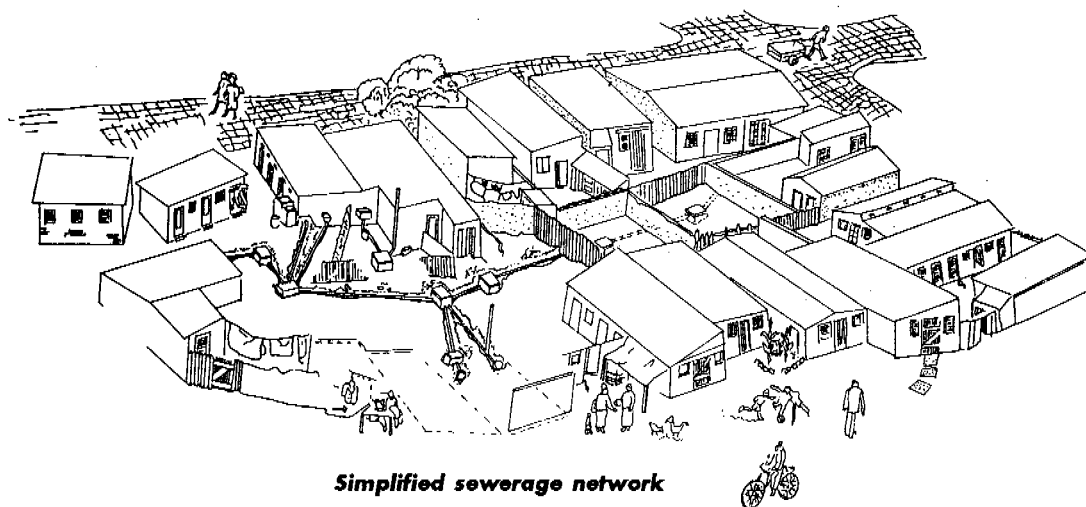
The role of the project team was:

- To collaborate with the contractor.
- To enlighten the households about the project since it requires a great deal of participation from the population concerned.
- Ensure good financial management.

Financing:

An in-depth survey involving 3 000 households is being conducted by members of the project team to assess the exact cost households have to pay for connections to the sewerage network.

In addition to this, a monthly sanitation tax will be imposed on all households. This will be determined in consultation with GWSC, and based on the water consumption per house. This tariff has not yet been decided but might be the same as that paid in Accra: 35% of the water bill.



Simplified sewerage network

Food for Thought:

• The introduction of the sewerage network might prompt the departure of the poorer inhabitants in the area (who cannot afford the costs of installation and maintenance), a situation which will alter the population pattern.

• In setting a ceiling for sanitation taxes, how can such a tax be calculated for efficient cost recovery as well as consider the daily expenditure of the households (300 to 500 cedis/month/household for the use of public latrines and 500 cedis/month/household for pit emptying) ?

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Annex:

**Economic comparison of different
technologies in home latrines**

	lifespan (years)	volume of pit (m3)	interval between two pit emptying (months) -m3-	cost of construction, latrine and soakaway (FCFA)	Annual cost of maintenance (FCFA/yr)	Annual cost of emptying (FCFA/yr)	12 % discount (FCFA/yr)	12 % discount FCFA/inhab.
Traditional. latrine								
8 people	6	1,5	0	12 000	1 000	0	3 900	500
16 people	6	3,0	0	15 000	1 000	0	4 500	300
Vault latrine								
8 people	15	0,8	3	60 000	1 000	28 000	37 808	4 700
16 people	15	1,6	3	100 000	1 000	28 000	43 680	2 700
VIP with pit & soakaway								
8 people	6	0,8	0	55 000	1 000	0	14 000	1 800
16 people	6	1,3	0	57 000	1 000	0	15 000	900
Double pit VIP with soak away								
8 people	15	1,3	24	69 000	1 000	1 000	12 000	1 500
16 people	15	2,3	24	77 000	1 000	1 000	13 000	800
Pour flush latrine								
8 people	15	3,2	24	69 000	2 000	1 000	13 000	1 600
16 people	15	5,4	24	74 000	3 000	1 000	15 000	900
Septic tank with infiltration tank								
8 people	15	1,6	36	185 000	24 000	2 500	54 000	6 700
16 people	15	3,2	36	300 000	48 000	2 500	95 000	5 900

source: BFK 1993 report

Component 4: The Training Network Center, TNC

One of the objectives of the project is the sustainability of low cost sanitation by establishing a training structure and the development of local human resources.

The Training Network Center was established around the same time as the implementation of the pilot project, in spite of some initial difficulties to recruit personnel.

Principal objectives of TNC:

- To develop local human resource capacity in the adoption of improvement of low cost technologies in water and sanitation.
- To undertake applied research into improved technologies and approaches in the delivery of water and sanitation services.

Selection criteria for members of TNC:

- Availability.
- University employment status.
- Availability of specialized skills.

- Inform water and sanitation specialists on current sector developments.
- Advise governmental and non-governmental organizations on planned and on-going studies, evaluations and project preparation activities.
- Group or individual training for non-governmental project personnel.

Les bénéficiaires du centre:

- Trainers.
- National decision makers, local authorities and community representatives.
- Water and sanitation professionals.
- Engineering, public health, planning, architecture, management and social sciences students.

The center is financed through grants and training contracts from UNDP, DANIDA, UNICEF, and the World Bank. Technical assistance is provided by DANIDA and RWSG, Abidjan. The center is expected to be self-financing through revenue from consultancy services. Many workshops have been run on the Kumasi

pilot project, on the one hand to disseminate practical experience from the project and sensitize national planners and decision makers, and on the other hand, to train communities and their representatives, such

as sanitation committee members, on project implementation approaches: management, technical aspects,...

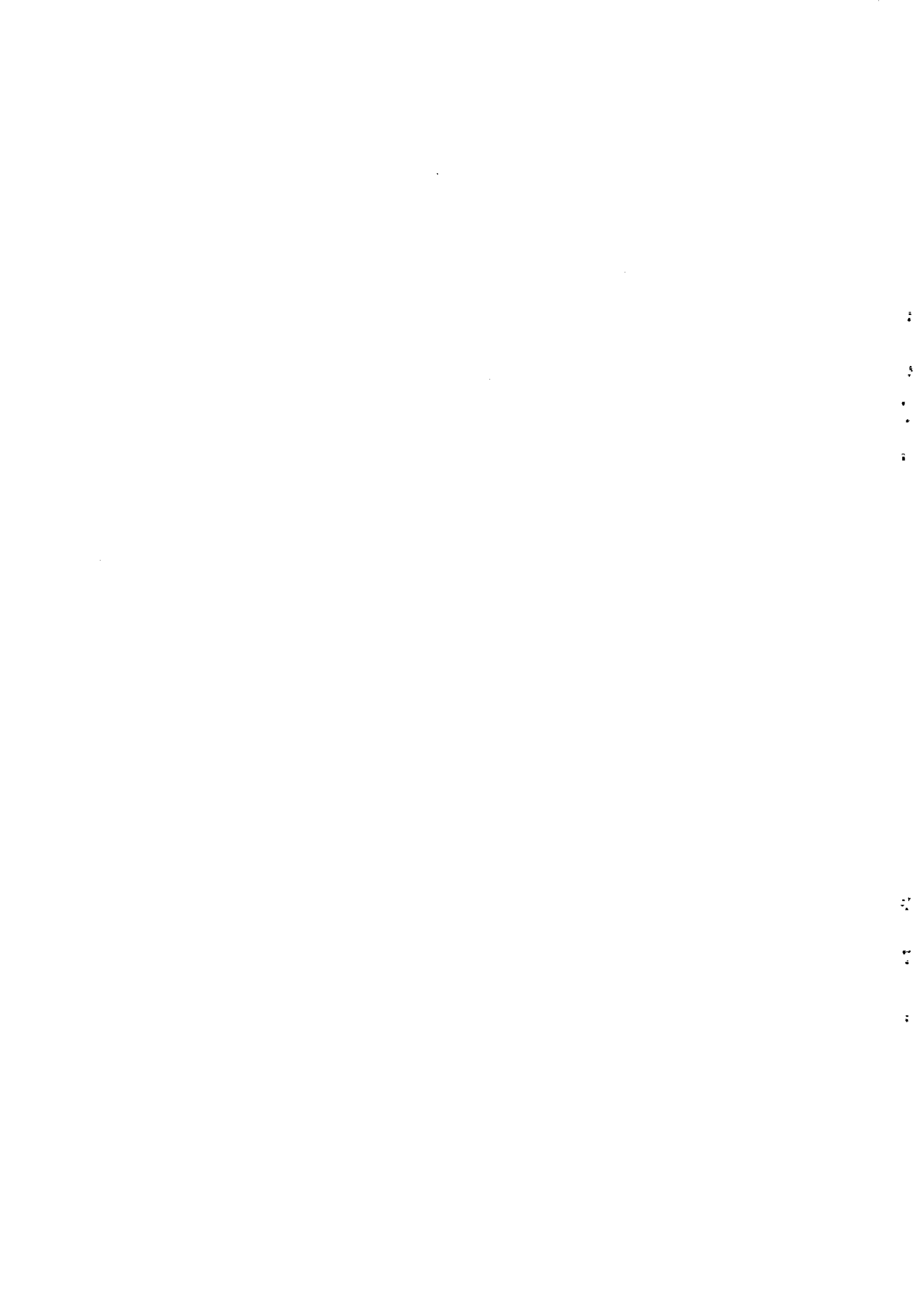


TNC training workshop

Activities of the Center:

- Training of trainers in the institutional sector, in the area of planning and management of water and sanitation services.
- Applied research into low cost water and sanitation technologies.





4 - Result and evaluation

The project design and innovative approaches adopted constitute the essential factors for the success of both projects, resulting in a real demand by the people (1 000 latrines, soak pits and shower units in Ouagadougou, 250 latrines and 6 units of public latrines in Kumasi).

Common success factors:

- Choice of simple and cost-effective technologies which considered sanitation habits of the households, their sources of water supply and their capacity to maintain the installations
- Animation and sensitization activities were very comprehensive in the case of Ouagadougou, thanks to innovative social marketing methods, and in the case of Kumasi by the exploitation of existing social structures. High priority was given to this aspect in the budget of the pilot project.
- Involvement of chiefs and local leaders in the project; their influence on the people made it easy for total acceptance of the project by the communities.
- Financial contribution by beneficiaries was according to their capacity. Even if results showed that these amounts were often over-estimated, the methods of payment and financial subsidies offered were indications that a large number of households desired to improve their sanitary situation.
- Private sector involvement created employment in the area (artisans, construction workers, small companies...), fostering adhesion to the project.
- Willingness to establish dialogue between the public and private sectors and the community.
- Financial viability of both projects guarantees their sustainability without recourse to external aid.

Factors to be considered:

- How does one expect to serve the underprivileged strata of the population who do not have the capacity to save? This question was always raised in the case of Ouagadougou where tenants were few and the expenditure was borne by the landlord alone, whereas in Kumasi, both tenants and landlords were used to the situation of contributing to meet expenses relating to the building.

- Since the proposed sanitation systems are not very familiar to the people, how does one ensure technical follow-up (maintenance, emptying,...) ?
- The “culture of fear” for diseases (hygiene education) was neglected during the information phase of both pilot projects. Today, conditions for a favourable environment for hygiene education have been created; but how does one adapt training methods of this new approach to sanitation ?
- How does one foster dialogue between different institutional actors about the contents of the program, in particular the role to be played by each partner, especially in the case of Ouagadougou where issues concerning decentralization provoke conflicting relations ?



Nature and number of latrines constructed:

By March 1994:

- 240 units of home latrines (160 blocks) were constructed in the three pilot zones.
 - 168 units in Moshie Zongo.
 - 44 units in Ayigya.
 - 33 units in S. Suntreso.
- 6 blocks of latrines comprising 4 new ones and 2 rehabilitated were completed in the in the CBD.

outside the project:

- Close to 20 public latrines were rehabilitated simultaneously by the metropolitan assembly in the city.

Characteristics of beneficiaries:

• Beneficiaries of home latrines were principally low income households. The medium and high income classes were really not affected by the project. Average income household preferred to wait until they had enough money to construct WC with septic tanks.

• Title to land is apparently not an important issue for financial investment by households:

The fact that one does not have land title does not dissuade families from investing in improved sanitation systems; Land title security is not acquired by the possession of official papers but rather by trusting the intermediation of chief, tribal and religious leaders.

The case of Moshie Zongo clearly illustrates this notion; the community had no official title to the land, but

about 400 households decided to construct latrines. (The project chalked more success in this area than in any of the other two areas.)

• Tenancy status does not prevent residents from contributing financially to the cost of latrine installation.

• The principal beneficiaries of home latrines were those who used public or bucket latrines which were in very deplorable states.

Nature and number of latrines constructed:

By March 94:

- 993 sanitary facilities in the two sectors were constructed within 18 months (forecast: 1500 latrines in 24 months):
- 135 VIP latrines.
- 18 pour-flush toilets.
- 248 rehabilitation of existing facilities.
- 401 soakaway pits.
- 191 shower units.

Amongst the households, 38% chose the construction of a sanitation system (new VIP latrine, rehabilitation of existing latrine, pour-flush toilet), 23% opted for wastewater disposal systems and 39% a combined the two systems.

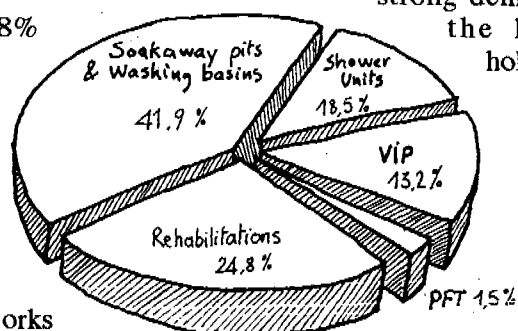
In all, 50% of construction works was for wastewater disposal (soak pits and showers).

outside the project:

120 sanitary facilities in 28 other sectors between March 93 and March 94 (after the TV commercial):

- 33 VIP latrines.
- 3 pour-flush toilets.
- 33 rehabilitation of existing facilities.
- 24 soak pits.
- 27 shower units.

Shower units were initially not included in the program; they were later integrated into the project due to strong demand by the households.



Characteristics of beneficiaries:

The results of the demonstration project can furnish us today with information on people who constructed any of the facilities:

Civil servants, pensioners, private sect	43%
Traders	33%
Artisans, the informal sector	11.5%
Farmers	6%
Religious leaders (imam, priest,...)	2%
Laborers, junior workers, salaried workers	1%
Armed Forces, security services	0.4%
House helps and others	0.4%
Total	100%

source: ORSTOM

Socio-economic status of household heads:

The demand was mostly by households with income higher than 65 000 FCFA/month. The very poor (7%) were not very well covered. For the others, it is difficult to forge a clear link between income levels and demand; the over riding consideration was the household's capacity to save towards meeting the cost of the facility. There was not exact data showing the correlation between the demand and the type of housing, but it can be said that construction activity took place

in all the different types of settlements, from mud brick housing areas to high income housing areas.

Cost recovery:

Recovery rates of home latrines:

A total of 100 000 cedis, being 64% of the total cost of installation was what households expressed as willing to invest as down payment towards the construction of the latrines.

The collection of the repayments in installments permitted a constant contact with the beneficiaries.

"Some people had problems with payments. There are many tenants in each house and the landlord has to collect the monies every month; sometimes he does not get the required amount. At other times he uses the money collected for other expenses...We have to return several times before the money is paid."

*Mr. Isaac Kofi Bimpa
Member -
sanitation committee S. Suntrreso*

Examples of costs:

- VIP with pit, mud brick superstructure = 120 000 Cedis.
- Double pit VIP, mud brick superstructure = 400 000 Cedis.

Charges for public latrines:

After being renovated and put under private management, charges for using public latrines have increased from 10 cedis to 20 cedis per person per visit; these fees have been approved by the metropolitan authority.

Public sanitation facilities regularly used since colonial times, offer the advantage of servicing some sections of the population who could not afford home

Comparison between willingness-to-pay and real costs average per month in cedis.

Type of facility	Estimated Cost	Real Cost
Sanitary system	1500	7000

latrines on one hand, and on the other hand generated regular incomes to those who managed them.

Improvement of municipal finances:

The KMA used to spend about 800 000 cedis on maintenance and emptying of public latrines on the 12 pilot sites in the CBD. Today, KMA generates profit from 20% of the monthly turnover paid by private companies managing the latrines. The WMD expects to collect monthly surtax of 750 000 cedis between now and the year 2000.

"Today 285 public latrines are managed by private companies who pay their percentage surtax regularly to the department. These decisions were very important to make since the government asked us to cut back on our personnel. Workers who were retrenched now work for the private companies and these companies now employ more of them than we did: at a ratio of 3:1"

*Sailfu Lukman -
WMD*

Cost recovery rates for home latrines:

Moshie Zongo: 59%
= 9M cedis instead of 15.6M cedis

Ayigya: 62%
= 2.8M cedis instead of 4.5M cedis

S. Suntrreso: 71%
= 2.9M cedis instead of 4.1M cedis

Average rate: 64%

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- The privatization of public latrines guarantee their maintenance and contribute to balancing of the municipal budget; however if privatization is not controlled, there is the risk of the public authorities neglecting their role

and allowing increases in the cost of services for city dwellers.

Cost recovery:

Comparison between willingness-to-pay and real costs average per month in (FCFA)		
Type of facility	Estimated cost	Real cost
Wastewater disposal	345	417
Sanitary facility	2500	7 050
Cost for having both	1462	6 185

source : ORSTOM

Households paid more than what they declared they were willing to pay during the WTP survey.

The cost of construction depends on the choice of materials (superstructure, roof,...), the type of soil, (difficult to excavate, need for lining...), and the labour costs negotiated with the artisans.

With regard to the WTP survey, less people participated but invested more into the project :

When one compares the actual investments made by the households with what they proposed to invest in the WTP survey, quite a large difference is observed. Households paid up much more money within a relatively short time.

On the contrary, the number of people interested in the project was considerably overestimated; 80% of the population indicated during the survey they were ready to self-finance their construction of latrines if the

Examples of cost:

- Double pit VIP with mud brick superstructure = 60 000 FCFA
- Double pit VIP with hollow blocks superstructure = 100 000 FCFA (subsidy : 1/3)
- Artisan: 8 000 to 12 000 FCFA per VIP

total cost was up to 50 000 FCFA.

Reasons for contradictions between survey results and the real situation :

- Proposed latrine models did not correspond to desires of some of the people. It was noted that the current cost of wastewater disposal was more realistic than that being suggested for relatively unknown sanitary facilities.

- Prices for the latrines turned out to be too high for households with low purchasing power as compared to what was initially proposed to them.

- It is possible that majority of those who responded quickly to construct their latrine already had the intention of improving their systems of sanitation way before the project was introduced. The newly interested households need a considerable amount of time to prepare for the construction of their latrines.

- Some people had higher incomes than they had previously declared.

- Some people made enormous financial sacrifices.

Mode of financing:

Households had to assemble the needed materials, dig up the pits and pay for the artisans. There were subsidies on the slabs and ventilation pipe for each latrine constructed.

These principles provided incentives and did not require rigid management and seemed to correspond to the normal habit of constructing "little by little". Since this system did not put any pressure on repayments, it sometimes

Cost of facilities in FCFA (before devaluation):

Type of facility	minimum cost	maximum cost	average cost	subsidy
- Pour flush	82 500	88 500	85 500	19 500
- VIP	31 750	157 450	91 045	21 896
- Rehabilitated trad. latrines	3 200	76 800	13 851	2 203
- Soakaway pit	8 500	55 540	19 925	6 358

source: ORSTOM

- The quest for financial viability could drive the WMD more and more into choosing big well-known and credit worthy companies to manage public latrines to the detriment of artisans and small scale companies.

Long term economic gains:

One of the principle reasons why some households made the decision to construct home latrines was its long term economic advantage:

- Households spent an average of 1 200 cedis a month for the use of traditional public latrines and 2 400 cedis for the use of improved pit latrines (rent costs 2 300 cedis / month , water costs 1 330 cedis /month).
- The amount paid for suction trucks to empty pit latrines averages 10 000 cedis /year ; this makes the alternating or double pit VIP rather economical.

Cultural acceptance:

- In spite of difficulty in managing the city's waste and the general urban poverty observed in Kumasi, the people are still very clean and are still proud to have their city labelled as the "garden city" of Ghana.

This context facilitated the job of sensitizing the people about hygiene in the city as well as the proper maintenance of sanitary facilities. Most of the latrines that were built are in excellent condition.

- Ghanaians have been used to paying for the use of public latrines for some time.
- Decentralization of organizations in the city offers a favorable atmosphere for dialogue (area meetings, metropolitan assembly meetings). The sanitation project relied on these occasions of community participation to engage in discussions and supply information to the people.

A wide range of technical options results in a better response to the needs of the people:

It was noted that in Kumasi, as opposed to Ouagadougou, the component of wastewater disposal was not considered since the site was rather undulating and therefore easy for drainage purposes; despite this situation however there was high demand for such facilities by most of the houses visited.

Artisans here did not receive any special training as was the case in Ouagadougou and were not officially approved by the metropolitan authority ; The project team directly saw to their training and supervision at the building sites.

Construction of the latrines required much more care than for other types of construction. Good know-how and sharp professional consciousness were needed since mistakes in sanitation works are literally 'buried' and invisible.

Kumasi's institutional framework was one of the essential factors for the success of the project:

The policy of decentralization in the country since 1988, resulted in participatory decision making and allowed a certain amount of autonomy for local authorities.

The notion of decentralization remained nonetheless theoretical ; the municipal authorities looked up to central government for direction in many cases rather than solicit the support of the local assemblies.

The Kumasi Sanitation Project, KSP, leaned largely on the decentralized structure and contributed to its implementation and strengthening.

The system of decentralization opened up constant dialogue with the different actors and officials of the city:

"Some assemblymen did not agree to the privatization of public latrines since management of the public latrines represented an important issue in the electoral areas.

We have had a lot of meetings and

took a lot of time for households to be ready to start construction. In such cases, the support of animators on the sites was indispensable.

It can also be noted that contrary to the indication during the WTP survey that 25% of households had access to bank loans to undertake construction works, very few of household met this expectation. Majority of them made use of their own savings as well as that of a close relation (son, brother,...).

With respect to the project, only 8 persons resorted to bank loans. Out of this number 3 had obtained loans from the People's Savings and Credit Bank. This type of loan did not seem common with the People's Banks, which preferred to give out loans for productive activities and not to beneficiaries for the construction of latrines, "we prefer to borrow for very serious reasons," was the response of some people who were questioned.

Comparison of sectors 2 and 16:

Not enough substantial comparative elements could be obtained on the performance of the two sectors in respect to the demonstration project.

According to the animators, it was a lot easier to explain and disseminate the aims of the project in sector 16, which had a young and relatively new and heterogeneous population than in sector 2, a more established and homogenous population with assertive traditions.

"It was difficult to make ourselves accepted by the people, and they were less open to new ideas. It was very essential to respect their behavior and trust them; In the end I became a member of the community; I attend funerals, marriage ceremonies and outdooring ceremonies of children. I always stop by to greet important people in the area...The plots are smaller than those in sector

16 and so there is not always room to fit in latrines, shower units, the soakaway pit,...the households sometimes have to make a choice..."

Animator

Technical options offered:

One of the essential factors for the success of the project lay in the wide variety and range of facilities proposed: shower units, washing basins, soakaway pit, VIP latrines and pour flush toilets. This variety best responded to the varying demands of the households and fitted the actions into a more global package of improving the habitat.

Training of the artisans and regular supervision of construction works guaranteed good quality output.

70% of the households had traditional latrines; rehabilitation of these latrines seemed the most economical and mostly requested by low income households. There is the need to improve the mode of constructing these units. Since the ventilation pipes are fitted directly on the toilet slab, residents are obliged to destroy the pipe in order to lift the slab during pit emptying.

Partnership:

The SSP-O was developed with the support of some donor agencies, but financial issues slow down consensus between the partners concerned with the different aspects of sanitation.

A partnership with CREPA (regional and national) will be a constructive arrangement in the community participation project in sector 7 at Ouagadougou. This could serve as a good conduit for the dissemination of the principles of the SSP-O and an effective link between research and practice.

Demand for on-site sanitation was created:

Discussions with different people in the area helped us to identify the

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K U M A S I

have together evaluated the impact of this decision and have come up with interesting solutions for everybody.

It was decided that each sub-metropolitan assembly would retain 25% of revenue collected from public latrines in their district ; this amount will be shared amongst the various electoral areas. Revenue from public latrines in the Central Business District (CBD) will go entirely to KMA. Today, each metropolitan assembly manages its own funds allowing for true local democracy..."

Salifu Lukman - WMD

- Another important key for the project's success lay in the enthusiasm and interest of the former metropolitan chief executive of Kumasi in this project and to his commitment to support and facilitate administrative and financial actions. His replacement by the government (in Ghana then, the metropolitan chief executive was appointed by the state), reduced the momentum of the project.

Ssocial structures:

- It was quite noticeable that women as well as women's organizations were not sufficiently involved in the project. For example, no woman was chosen by the community to join the sanitation committee; they are however the ones most affected by problems concerning water, poor hygienic and sanitary conditions. The project team should try to encourage greater participation by women.

- Members of the sanitation committees in the areas are representatives of local associations; Most of them are very devoted people with the strong desire to be useful in improving conditions in their area. They are very familiar with the area and are also close to the people in a way. This fosters a good relationship with the households , but also creates some kind of ambiguity vis-à-vis their role

in their mother associations (they become less involved in activities of the associations since they are paid to help the area). The role of the committee members turn out to be very delicate; They must listen to the people and at the same time be firm with their "brother" who collects the monthly payments; this explains, in a way, the difficulties encountered in the management of the credit system.

"The objectives of our association are to keep the environment of Asafo clean and to mobilize the youth. We clean up the area as well as the public latrines; KMA supplies us with the necessary equipment. We also help people in difficulty.

We decide, together with the community, what to do with proceeds from public latrines. Very often, we purchase materials for our primary school, construct drains along the roads, and make repairs on the public latrines,... if there is still some money left over, we contribute it to the city orphanage."

President of the Youth Association in Asafo.

Extension of the project:

Dissemination of this experience through training workshops by the TNC, allowed decision makers and sanitation specialists to evaluate the advantages of this new approach. Since then, similar projects are being undertaken in other secondary cities of Ghana.

RÉSULTS & EVALUATION

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principle reasons which contributed towards the achievement of the objectives of the project:

- Work of the animators and the dynamism it created.
- The subsidies.
- Leaders and influential people in the area (who supported the project and had latrines constructed in their own homes, thereby setting a good example).
- Women who were better-informed (the ones with whom the team principally interacted during visits to the homes) and very concerned (especially for soakaway pits, washing basins and showers).
- The phenomenon of copying ones neighbor and organized visits to homes with improved latrines.
- Social marketing (TV commercials, radio...).

"When we were presented with these facilities, I reckoned that this was an opportunity to be seized. We had traditional latrines in deplorable conditions. I spent 6000 FCFA per year on emptying of the pit latrine, which was too much. I compared the costs and realized that it would be more economical to construct a double pit VIP latrine which did not require regular emptying by suction trucks and since we are not many, it would take at least 6 years before the pit filled up. I therefore constructed a VIP latrine, a shower unit and a soakaway pit with my savings and today, I am a very happy woman".

*Madam Kafando -
sector 16*

Extension of the project:

There were demands from areas outside the pilot sectors. At least 120 latrines were constructed in a year. Due to the fact that the demonstration project anticipated subsidies for only the two pilot sectors, these new latri-

nes were solely financed by the beneficiaries. It is expected that after the pilot phase, financial support will be extended to cover the whole city.

Works in the other sectors mostly involved new VIP latrine construction and rehabilitation of existing latrines as well as soak pits and shower units:

- 33 VIP latrines.
- 3 Pour-flush toilets.
- 33 rehabilitation of existing facilities.
- 24 soakaway pits.
- 27 shower units.

The beneficiaries who were interviewed in the other sectors were mostly middle class citizens.

It can be said in the mean time that, without specific promotion activities, all people who are well informed and interested and have sufficient financial capacity will participate in this project. Concerning the other sectors of the city, the project team is negotiating the role of the communes and their involvement in the future extension of the project.

TV and radio commercials have created enough exposure on the project and have generated demand in other parts of the country.

Recommendations of the SSP-O have constituted an important component of the PACVU project. It is expected that the CFD and IDA will finance the sewerage network in the industrial zone and the city center respectively. The PACVU anticipates financing to develop a strategic sanitation plan for Bobo-Dioulasso, the country's economic capital. On-site sanitation will be financed from sanitation taxes and contributions from the beneficiaries.

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5 - Lessons and perspectives

The pilot projects are entering their final stages. The basis and mechanisms are now operational for the public and private sectors to sustain actions and programs.

It might be premature to make a definite evaluation of these two projects and analyze creditable actions in progress or those that have just been completed. It would be necessary to postpone this evaluation temporarily, but nevertheless some partial assessment can be attempted.

Consider the different demands and offer a range of technical options

In both cases, the technical options proposed took into consideration the realities of each situation and the demands of the different sections of the population. Choices were based on realistic and cost effective solutions rather than the ideal:

At Kumasi, on-site sanitation was recommended for the indigenous areas, public latrines for the business districts and a simplified sewerage network for densely populated tenement areas.

In Ouagadougou, a conventional sewerage network was proposed for densely populated city center and on-site latrines for the rest of the city. Wastewater disposal systems (soak pits and shower units) were in high demand in Ouagadougou, especially by the women; this component which was not a priority in the case of Kumasi is now under consideration.

As regards the follow-up of the program, one can question the justification of the estimated number of on-site systems earmarked to be constructed between now and the year 2000. Could the data be realistic? Couldn't we, while preserving the initial objective, develop intermediate technical solutions that are more adaptable to the evolving demand ?

Introduce technical improvements

The Ouagadougou project showed technical feasibility and financial interest at play in the rehabilitation works; nevertheless some solution remains to be found to reduce the cost price, for example, the construction of the superstructure with mud bricks, a building material which has been unjustly devalued and often used only in mediocre construction works.

**Ensure
training
and
follow-up**

Construction of VIP latrines require special know-how and professional consciousness (mistakes are not visible once the job is completed); it is thus necessary to lay emphasis on training artisans and ensure continuity in the supervision of artisan who were involved the pilot phase and throughout the rest of the program. We can also reflect on the reactions and attitudes of households when they have to excavate the mineralized excreta from the pits. The people should be advised on the use and daily maintenance of the facility in order to guarantee excellent operation of the latrines.

**Protect
the quality
of water
resources**

The SSP-O recommends the construction of improved latrines which are shallower than the traditional pit latrines. In areas of the city with high water table, a sewerage network is proposed to reduce the risk of polluting ground water. An environmental impact assessment study will provide the criteria for the selection of one of the two technical options proposed for the sewerage network.

**Develop the
local capacity
to respond
to demand**

In both cases, the autonomous departments (the waste management department -WMD- at Kumasi and the sanitation department of ONEA in Ouagadougou) which generate annual revenues and benefited from a competent team trained during the pilot project, can henceforth manage the sanitation program. The private sector was involved in the management, maintenance of public latrines, construction of low-cost sanitation facilities, animation and promotion of on-site sanitation throughout the pilot phase. Training that they received will come in handy now as there is greater demand.

**Promote
sustainable
sanitation
services
and reduce
resort to
external aid**

In both cases, the principle of autonomous financing instituted ensures the program's viability in the long term:

In Kumasi, revenue for the WMD is generated by cost recovery on home latrines, revenue from public latrines and a sanitation tax. This revenue will be used in part to improve public latrines, subsidize home latrines and contribute to the construction of a sewerage network

In Ouagadougou, sanitation taxes collected by ONEA will be devoted to on-site sanitation (subsidies and animation work), construction of sewerage network and school latrines.

The development of the sewerage networks, in both cases, requires very high and prompt investment, this necessitated the soliciting of external financial aid. Maintenance will however be financed from the sanitation taxes.

In Kumasi, the inhabitants will have to pay for their connections to the sewerage network whereas in Ouagadougou, no contribution is expected from the beneficiaries.

In Kumasi, the financial arrangement seems like a good compromise between public utilities, solely financed from public funds and on-site

sanitation systems totally financed by the beneficiaries.

This arrangement certainly requires a great deal of animation and social interaction.

Households capacity to contribute and cost recovery

In Ouagadougou, just as in Kumasi, significant financial contributions from the households were observed: In the former case, about 70% of the total cost in the form of purchasing of materials and labour cost and in the latter case, the recovery of an average of at least 60% of costs, which represents a good rate of recovery. The objective of financial participation of households was realized, nevertheless, the inability of some households to contribute substantially towards the construction works denied them access to any of the sanitation systems proposed:

In Ouagadougou, only families who were capable of making rapid savings benefited from the project, and in Kumasi it was usually the houses with a large number of households who could organize themselves to share the cost (tenants and landlords alike) of the down payment and subsequent repayment of the credit.

The experience of giving financial incentives in Kumasi showed that the system of credit which seemed more profitable than the granting of direct subsidies as was the case in Ouagadougou, entailed a very heavy burden of management. This is the reason why home latrines which was until now paid for by the beneficiaries through the credit scheme will henceforth require 40% financing by the KMA and 60% by the beneficiaries. These rates were based on the cost recovery results of the pilot project.

**Spearhead
a global
approach and
coordination
of actions in
the city**

Actions in sanitation constitute only one component of an urban development program. To treat the subject as a series of technical actions leads to an under estimation of the interactions between sanitation and development activities both at the neighborhood level and in the city as a whole.

In the two cases studied, the absence of an urban development or structural plan did not hinder the implementation of the strategic sanitation plans, which is flexible enough to adapt to changes in development and the future policies of the city. It is however probable that, in both cases, the distribution systems for water and sanitation will become the starting points for an urban plan for the city. On the other hand, it is advisable to treat sanitation in its entirety, managing of wastewater and excreta in a coherent manner along the lines of collection/treatment/disposal.

The new PACVU project permits the integration of the recommendation of SSP-O in its global approach to improve standards of living, link up with other components of sanitation (storm water, solid waste, toxic wastes) and consequently, to ensure its continuity and extension throughout the whole city.

**Create
partnerships
and
cross-sectoral
institutional
relations**

Sanitation is an area which allows different institutions and local authorities to work together in the sharing of roles and responsibilities in a cross-sectoral manner, which is based on common or complementary themes.

However, experience has shown how difficult it is to establish dialogue between partners and arrive at a consensus concerning the sharing of roles and budgetary allocations in the context of a centralized administration as in the case of Ouagadougou. To obtain effective dialogue, it is necessary to reinforce the tools of partnership and methods used in dialogue:

- Working groups to deliberate on specific themes (e.g.: bye-laws and regulations of sanitation).
- Steering committees composed of representatives from the different institutions.
- General meetings to share information.
- Written accounts and reports of activities, regularly circulated to all partners.
- Written contracts, clearly defining the roles and responsibilities of each partner.
- Clear educational notes allowing all partners to internalize logic and reasoning.
- ...And others.

**Involve local
actors and
foster dialogue
between
the people
and the
authorities**

To bring about active participation of all the partners involved in the implementation of the project, it is necessary to give a thought to their concerns during the conceptual phase. This does not imply accepting whatever proposals are made but, discussing, remodeling and reformulating the proposals in such a way that they can be integrated to enrich the project.

Actions in sanitation consider different kinds of decisions which favor social development and the local economy (exchange, negotiations, creation of employment, creation of awareness to responsibility) and can foster dynamic dialogue between different partners.

On the contrary, if the basis for decentralization of decision making is not instituted, the social contract becomes more difficult to establish. Sanitation thus needs a social fabric, consisting of participation and a network of linkages which reaches the core of the population. On the other hand, the development of a sanitation project can stimulate and reinforce a decentralization system in theory. It is therefore important to search for ways of promoting exchanges between the population and the authorities as well as developing the spirit of negotiation.

In both cases, the implementation phase was an effective period for participation for all the different actors.

Even in Ouagadougou, where dialogue was not all together successful during the planning period, the pilot project benefited from moments

**Develop,
encourage and
strengthen
local dynamics**

where the energies and competencies of the different actors were marshaled to try and solve the same problems, albeit trying to solve the problems from different angles.

It also allowed for some abstract discussions but centered around practical actions: working groups discussing recreational and social marketing activities.

The principle adopted in Ouagadougou was to take advantage of modern information systems and innovative methods of animation: guided tours, radio and TV commercials, football matches, theater performances and dancing. In Kumasi, the project team relied on existing information networks: area meetings, assembly meetings, festivals and other ceremonies organized around themes,...

To perform these activities, the project teams paid attention to local suggestions, but the problem remains on how best to continue to entrench these organizational methods after the project. In Kumasi and Ouagadougou, linkages within the communities will be a deciding factor: At Kumasi, the sanitation committees must be reorganized to totally involve the inhabitants in other aspects of development and not limit them to the collection of monthly repayment installments from residents. Their roles must be redefined. Women and the youth could well be incorporated into these committees to contribute to the development of their area. It is also anticipated that, committee members should undergo training in accounting, organizational skills and technical training... at TNC.

In Ouagadougou, the toughest task for the team - ONEA/NGOs - involves how to sustain the dynamism across the city; It will no doubt be necessary to envisage close collaboration with liaison teams in the sectors, associations as well as NGO's and animators working in other urban projects.

In order to guarantee ownership and commitment of the communities to the program for improving the standard of living, schools programs can be developed. To encourage creativity, children can be taken on study tours to learn about environmental problems and the quality of life in the city. These activities which were experimented in the pilot project in sector 7 of Ouagadougou must be formalized and taught in primary schools through workshops (drawings and models, area visits, documentaries, role playing scenarios, demonstrations...) as well as organize debates with parents and other inhabitants in the community.

Sanitation projects can generally be integrated into social development programs considering the interaction of activities between the different spheres. Helping, for example, local associations and the youth to take charge of certain activities linked to sanitation and share tasks with public authorities and private enterprises: management of public latrines, maintenance of street drains and storm drains, pre-collection of solid waste.

These activities could formalize their existence in order to organize and teach them to manage and generate revenue, thereby gaining social recognition.

Principal stages for community mobilization

- Open an office in the area to serve as a focal point for dialogue between the different actors.
- Participatory studies to capture experiences and experimented actions by the communities.
- Identification of the real spokespersons of the community and establish working groups.

Start with a few activities in a defined area

Conducting pilot projects in the selected areas enabled the projects to try out a new approach and progressively gain mastery of implementation; it also allowed the testing of the relevance of processes and mechanisms employed, and to modify them in accordance with problems encountered before taking further actions.

Scale up actions and disseminate the experience gained

With the objective of both projects being to prepare a basis for a national program, there is every reason to believe it has been a success. In Kumasi, the institutional framework that has been established and the extension of actions undertaken will be guaranteed in the long term, thanks to:

- The establishment of a Training Network Center (TNC) on low-cost sanitation at the University of Science and Technology (UST) in Kumasi. This center will disseminate the experience to professionals in urban sanitation, decision makers, local liaison groups and national consultants, through workshops and research reports.
- The integration of one of the members of the project team into the Ministry of Local Government and Rural Development will lend support in the country for such developments in Kumasi and other parts of the country.

In Ouagadougou, the department of sanitation, within ONEA has already been approached to draw up a Strategic Sanitation Plan for other cities of the country (Bobo-Dioulasso). Alongside collaboration with CREPA, within the framework of the third urban project (PDU3) ONEA could also help in disseminating the experiences of the SSP-O.

A methodology for intervention can be developed from this experience as well as the development of educational materials. The universities and the research centers can come together to refine and disseminate the lessons learnt from this new approach.

Glossary

- FCFA Currency for French West African Countries
1 FF = 50 FCFA (before the Jan.'94 devaluation)
1 FF = 100 FCFA (after the Jan.'94 devaluation)
- Cedis Ghanaian currency
1 \$ = 950 Cedis
- ADRA Adventist Development Relief Agency.
BSONG Co-ordinating office for NGO's.
CDR Committee for the Defense of the Revolution.
CIEH Committee for Inter-African Hydraulic Studies.
CREPA Regional Training Center for Low-cost Water Supply and Sanitation.
DESA Department of Health and Sanitary Education.
EIER International school for Rural Infrastructure Engineers.
ETSHER Advanced School for Technicians in Rural Infrastructure.
GRAAP Research group on actions to improve rural life.
GWSC Ghana Water and Sewerage Corporation.
IDA International Development Association.
IDWSSD International Decade for Water and Sanitation.
KMA Kumasi Metropolitan Assembly.
MOH Ministry of Health.
NGO Non-Governmental Organization.
ONASENE National Department for Maintenance, Cleansing and Beautification.
PACVU Urban Standard of Living Improvement Program.
PDU3 Third Urban Project.
PFT Pour-flush toilet.
RWSG Regional Water and Sanitation Group /West Africa.
SSP-K Strategic Sanitation Plan for Kumasi.
SSP-O Strategic Sanitation Plan for Ouagadougou.
TNC Training Network Center.
UST University of Science and Technology.
VIP Ventilated improved pit latrine.
WTP Willingness to pay.