MINISTRY OF PUBLIC UTILITIES

18.1 National Sewerage Projects

18.1.1 Introduction

The Waste Water Management Authority (WMA) took over the responsibility of operating, managing and maintaining the waste water systems since the year 2001 by way of the ‘Contract de Delegation’ and the ‘Contract de Maitrise D’ouvrage Déleguée’. The WMA has altogether the obligation of implementing The National Sewerage Master Plan 1994 (NSMP) on behalf of Government.

The key objectives of the NSMP are to:

- Increase coverage of the sewerage infrastructure so that fifty per cent of the population has access to the public sewer by 2010.
- Provide adequate waste water treatment facilities.
- Halt and reverse the effects of environmental degradation in the country.
- Improve health and sanitary conditions of the population.
- Ensure financial sustainability of the wastewater sector.

18.1.2 Implementation of the NSMP

The implementation of the NSMP has been forecasted up to year 2010. In line with the NMSP, WMA has identified a list of priority projects with scheduled completion dates as agreed with Funding Agencies.

Observations

There were inordinate delays in the implementation of the projects. As a result, the Funding Agencies had to revise the completion dates in several instances.

An average time lag of five years was observed in project execution. Still to date, further delays are being encountered.

The Plaines Wilhems Sewerage Project (PWSP), which is the major component of the NMSP, with actual project value of some seven billion, is still well behind schedule. The contract for the construction of reticulation networks and house connections has been awarded recently, representing only some 38 per cent of the total coverage. Further, this contract is still at preliminary stage.
The Pailles Guibies Sewerage Project (PGSP) and West Coast Sewerage Project (WCSP) have been put aside since long.

18.1.3 Reasons for delay in implementing projects

The main reasons were:

- Lack of in house capacity to review and approve design and tender documents at start.
- Lengthy Pre award stage and evaluation process.
- Identification of additional works after allocation of contracts.
- Inadequate planning and follow up of the projects.
- Lack of expertise in the Sewerage Sector.
- New procurement procedures in place for award of contracts.

Implication of delays

Substantial increase in project cost.

Treatment Plants and pumping stations operating below capacity.

Delayed financial, social and environmental benefits.

Commitment charges on undrawn balances of loans.

Risk of losing funds from donor agencies.

Unutilised funds for use under other national priority projects.

Ministry’s Reply

Other reasons attributed to the delay in implementing projects were:

- Recourse to Court cases by aggrieved bidders to stay action on the award of contracts.
- Obtention of wayleaves.
- Additional works due to unforeseen circumstances and late requests from other utilities agencies for the re-routing of their existing services.
**Action taken**

The WMA has reinforced its in-house capacity and the completion date has been rescheduled from 2010 to 2013.

Each project is now under the responsibility of a Project Manager and adequate follow-up is being made.

**18.1.4 Increased Project Cost**

Delays in the implementation of the NSMP have largely impacted on the project costs as shown in Table 18-1.

<table>
<thead>
<tr>
<th>Project</th>
<th>Original Cost Rs</th>
<th>Revised Cost Rs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaines Wilhems Sewerage Project</td>
<td>2 billion</td>
<td>7 billion</td>
</tr>
<tr>
<td>Pailles Guibies Sewerage Project</td>
<td>353 million</td>
<td>845 million</td>
</tr>
<tr>
<td>West Coast Sewerage Project</td>
<td>703 million</td>
<td>1.4 billion</td>
</tr>
<tr>
<td>Baie du Tombeau Sewerage Project</td>
<td>284 million</td>
<td>533.7 million</td>
</tr>
</tbody>
</table>

A two fold increase is noted in respect of three projects, whilst for the PWSP, it has increased by more than 300 per cent. The figure for PWSP is expected to inflate further.

Consultancy costs have also increased significantly. For example, additional funds amounting to some Rs 20 million will have to be disbursed under the Baie du Tombeau Sewerage Project—Contract WW56X.

High escalation costs of some Rs 189.5 million were incurred under the Construction of the Trunk Sewer.

**18.1.5 Underutilised Assets**

Due to delay in the execution of the reticulation and related house connection projects, Treatment Plants and Pumping Stations worth several billion of rupees are still operating below capacity, notwithstanding the high costs of operation and maintenance of same, which are around Rs 200 million annually. The timely implementation of the house connection works under the PWSP will not only bring material amount of revenue, but also reduce the operation and maintenance costs of Treatment Plants.
18.1.6 House Connection Programme

The House Connection Programme is the backbone of the financial sustainability of the Waste Water Sector and its future financial equilibrium. The number of house connections effected is a Key Performance Indicator for the Waste Water Sector, of which the PWSP is the main component.

Observations

Delay in the completion of the Trunk Sewer has adversely affected the allocation of reticulation and house connection contracts. Hence, the completion date for house connections which was initially scheduled for year 2008 has been extended to 2015.

In order to achieve the 50 per cent sewerage coverage, the WMA had set up the target to increase the rate of connection to more than 5,000 yearly as from 2003 to attain 11,000 each year by 2006. However, this is far from being achieved as for the three years up to May 2008, only 5,161 houses have been connected.

In June 2008, the total number of house connections was 64,164. Only 875 connections, representing 24 per cent, have been effected in fiscal year 2007-08, compared with 3,600 as planned. Based on the actual yearly connection rate of 2,500, the probability to achieve the target of 108,302 by 2013 is remote.

Delay in house connection will impact on Government budget as the cost per house connection inflates over time. In 2003, the average connection cost per household ranged from Rs 15,000 to Rs 40,000 whereas in 2008, it is around Rs 100,000 to Rs 150,000, that is 566 per cent increase. The significant increase in cost will have serious implication with respect to the validity of several agreements with Donor partners.

Ministry’s Reply

The construction of the Plaines Wilhems Trunk Sewer was completed in February 2008. Other house connections and reticulation projects are either at construction stage or will be shortly awarded.

18.1.7 Financial Sustainability

As the Operation and Maintenance costs are now being entirely funded by the WMA, this has worsened its financial position. For year fiscal year 2007-08, the WMA showed an estimated deficit of Rs 19 million compared to a net operating surplus of Rs 66 million for the previous year. Despite increase in waste water tariff as from April 2008, the WMA still runs the risk of not being financially sustainable in the future if revenue collection is not improved. Hence, the urgent need for timely implementation of the house connection contracts.
18.1.8 Unutilised Funds

Capital expenditure has remained below expected levels due to delays in the award of contracts. As of 30 June 2008, there were 16 works and consultancy contracts of total project value of Rs 16.7 billion whereas expenditure incurred totalled only Rs 8.78 billion that is some 50 per cent of the projected amount.

18.1.9 Funding

Due to lengthy delays in project implementation, funding from donor agencies has lapsed or will lapse shortly as in the case of the PGSP.

Regarding the PWSP, loans from the African Development Bank, (Contract WW99F – Lot 1B) had to be cancelled or extended as in the case of the Exim Bank of China - (Contract WW 81 F -Lot 2).

Commitment charges amounting to some Rs 5.2 million were incurred in respect of undisbursed portion of loans. Such expenditure is of a nugatory nature.

18.1.10 Financial, Social and Environmental Benefits

Financial benefits to be derived from the completion of the Sewerage Projects include mainly revenue from tariffs whereby the house connections under the PWSP are going to generate substantial additional revenues which would contribute to the WMA profitability.

However, at the present trend, WMA cannot reap the financial benefits before six to seven years’ time. Consequently, the associated social and environmental benefits are yet to be achieved.

18.2 Contract WW 110A – Construction of Sewerage and Water Supply Works in respect of additional works under Baie du Tombeau Sewerage Project Rs 533 million

18.2.1 Background

The project is an extension of sewerage facilities following the implementation of the Baie du Tombeau Sewerage Project Phase I.

The objective of the project is to provide sewerage facilities and rehabilitation of the existing water supply reticulation to the central part of Baie Du Tombeau and Riche Terre Industrial Zone.

The contract was awarded in August 2007 for the sum of Rs 533,751,563 (VAT inclusive). The start date was 11 September 2007 and the planned completion date is 8 September 2009.

The project was to be financed by the Government of India under an Indian Line of Credit (ILOC) in the sum of US$ 10 million (some Rs 300 million) and the difference by Government of Mauritius. Total amount paid to date is Rs 140.5 million.
The main shortcomings identified in the execution of the project were:

- Delay in awarding contract.
- Non compliance with conditions of ILOC Agreement.
- Eligibility of Payee.
- Indian Content of goods and services.

18.2.2 Delay in awarding contract

This project was to start in December 2002. It was only in August 2007, that is, some five years later that the contract was awarded.

The inordinate delay to start this project was attributed mainly to:

- Lengthy time to finalise tender documents due partly to staff constraints at the WMA.

Some three years elapsed for review and finalisation of the draft tender documents.

It took nine months to decide on the issue of inclusion of cost adjustment provision in the tender documents instead of a fixed cost contract; and another eight months to comply with the requirements of the Agreement.

Implication

Delay in awarding the contract has significantly inflated the cost of construction works. This project which was originally estimated at some Rs 284 million would now cost Government some Rs 533 million, that is, about 88 per cent increase. As a result, additional consultancy fees would have to be incurred in respect of supervision works.

Ministry’s Reply

The delay in the implementation of works under the contract was beyond the control of the WMA and was mostly due to the lengthy negotiation of the Line of Credit Agreement with the Exim Bank of India.

18.2.3 Non Eligibility of Payee

According to Clause 3.1(a) of the agreement, all goods and services were to be provided from India and payments could only be effected to the ‘Seller’ who is defined as the Indian Exporter.
Observations

Contrary to the above condition, the contract was awarded to a Consortium whereby the Indian and local firms were to provide 70 per cent and 30 per cent of the services respectively. Given that the criteria set under the Agreement were not met, Government of India did not agree to provide the necessary funding.

In view of the non disbursement of funds by the Indian Bank, accumulated payments totalling Rs 87.9 million were met by Government of Mauritius. In addition, Government is liable to pay interest for late payments as already intimated by the Contractor.

Ministry’s Reply

The Ministry of Finance and Economic Empowerment (MOFEE) sought the approval of the Exim Bank prior to the award of the contract to the Consortium. The Bank confirmed that it does not provide its no-objection at every stage of the selection process.

18.3 Non Compliance with Conditions of Agreement for Goods and Services

In May 2006, the Ministry of Public Utilities (MPU) pointed out that the terms and conditions of the ILOC could not be aligned with the requirements of the tender documents and amendments were eventually made thereto.

In March 2007, the representative of the MOFEE advised to reconcile the Joint Venture Agreement and the bid with the ILOC Agreement. However, WMA Consultant, after discussions with the MPU, MOFEE and WMA concluded that the requirements of the ILOC did not conflict with the bid of the Consortium.

After negotiations, the Exim Bank revised the input of goods and services to 92 per cent, prior to the award of the contract.

Observations

Although the tender documents were reframed yet no correspondence was seen exchanged with the Exim Bank to amend the conditions of the ILOC.

Given that the contract was a labour intensive one whereby the conditions of the ILOC would not be applicable, it was not clear why the issue was not raised at time when the reconciliation exercise was being carried out.

Although the Indian contents of goods and services were revised to 92 per cent yet these did not meet the conditions of the ILOC as the contractor was making maximum use of local labour and materials under the contract.

As there was no contractual obligation on the Contractor to submit works bills indicating the percentage of Indian/local services, it was thus not possible to ascertain the actual percentage of each component in the execution of the project as required by the bank.
Certain goods scheduled to be originally imported from India could not be procured therefrom as these did not meet the specifications of the contract. As such, the value of imported goods from India amounting to only Rs 15 million would also not be financed by the ILOC.

**Conclusion**

In the first instance, identification of funds for this project was one of the main impediments for its implementation. However, when funds were made available, the terms of the agreement, namely the Indian content of goods and services and the eligibility of the Contractor, were not complied with. Consequently it would have been impossible for any Indian Contractor to satisfy the stringent clauses of the ILOC. Government has now no alternative than to meet the full cost of the project out of its own funds at the expense of other priority projects.

Henceforth, all stakeholders should, prior to the signing of a loan agreement with a funding agency carry out an in depth analysis of its terms and conditions to ensure that the provisions are relevant and feasible to the needs of the project being undertaken.

**Ministry’s Reply**

It is the responsibility of the MOFEE to secure the relevant funding for the implementation of waste water projects and to ensure that the terms and conditions of the loans can be achieved, taking into account the requirements in terms of percentage of procurement from the donor country.

**18.4 Illegal House Connections**

A connection is considered to be illegal when a household who is not a registered customer of WMA is illegally connected to the public sewerage system thus evading sewerage fee. Illegal connections represent deficits for the WMA.

**Observations**

Cases of illegal connections have been increasing over the years. 213 cases were detected for period October 2007 to June 2008 during execution of works.

In 2004, WMA conducted a pilot project in search of illegal connections in a specific region. Out of 890 houses investigated, 188 illegal connections were tracked. However, as of June 2008, that is after some four years, the exercise has not been renewed.

Cases of illegal connections were being billed either on date detected or date stated by users. However, given that it is difficult to ascertain the actual date of connection, there is the risk that substantial amount of revenue might have been foregone.

Despite the upward trend of illegal connections, the Authority has not yet devised a strategy to detect same.
There is no provision in law to deter illegal connections to the sewerage system.

**Recommendations**

A strategy must be formulated for detection of illegal connections.

Regular surveys must be carried out to track illegal connections for billing of sewerage fees. These must also be detected on time so as not to run the risk of cases becoming time barred.

The law should be amended to include penalties so as to discourage illegal use of the system.

The assistance of the Central Water Authority could be sought for the timely detection of illegal connections.

**Ministry’s Reply**

Action is being taken at the level of the WMA to identify and regularise illegal connections.

WMA has been requested to reinforce its inspectorate team and to work closely with the CWA so as to identify and take prompt action in respect of any illegal connections to the public sewers.

**18.5 Illicit Discharges**

There was no indication that surveys were being conducted by the Authority to track illicit discharges.

**Ministry’s Reply**

The WMA is collaborating with the Ministry of Environment and the ‘Police de l’Environment’ to track down such cases.

**18.6 Unregistered House Connections**

This relates to households, which are already connected by WMA to the waste water system but not billed. Hence, waste water fees are actually being forgone for these connections.

**Observations**

1,428 cases of non-registered connections were noted in December 2007 and January 2008 during maintenance works for which new accounts were created. Most of these cases relate to connections effected by the National Housing Development Corporation (NHDC) around year 2000.
The customers were billed for period dated as far back as year 2000. Total amount involved was around Rs 13 million. As these bills have been backdated for more than five years, there is the risk that these cases have become time barred. Hence, the probability of recovering these fees appears to be remote.

Unregistered connections represent potential revenue, which the WMA has forgone over the years.

**Recommendation**

Proper surveys need to be effected to determine the extent of non-registered connections and ensure payment of sewerage fees.

**18.7 Survey of House Connections**

Audit performed site visits in four sewered areas based on independent lists obtained from the CWA.

**Observations**

Out of 90 houses visited, seven connections were found to be illegal at one place. Further checks revealed that in some of these cases, applications were made to the Authority but no connections had been effected due to delay in award of house connection contract.

At three other places, there were 40 unregistered connections out of which 21 relate to NHDC cases which were connected to the sewer system since long. In the remaining 19 cases, connections were effected by WMA itself for which no accounts had been opened. This is not satisfactory as it indicates a lack of coordination between the different sections of the Authority.

47 cases have been detected in only four specific regions. There is high risk that numerous similar cases may exist in different parts of the island.
Ministry’s Reply

The WMA has issued strict instructions to Consultants and Project Management teams to ensure that customers are registered as soon as they are connected with the sewerage system with a view to ensuring that waste water bills are issued without undue delay.

18.8 Water Charges to Religious and Charitable Institutions

Religious and charitable institutions have been benefitting from free water supply since long. Their eligibility was determined by the CWA. As of June 2008, some 1,400 institutions were being exempted from water charges.

Expenditure incurred by Government on behalf of these institutions over the last five years was as shown in Table 18-2.

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Actual Expenditure Rs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-04</td>
<td>8,746,657</td>
</tr>
<tr>
<td>2004-05</td>
<td>9,165,227</td>
</tr>
<tr>
<td>2005-06</td>
<td>8,046,451</td>
</tr>
<tr>
<td>2006-07</td>
<td>8,658,522</td>
</tr>
<tr>
<td>2007-08</td>
<td>7,697,607</td>
</tr>
</tbody>
</table>

Observations

Investigations carried out by CWA have revealed that there was misuse of water by some institutions:

- Water was used for other purposes such as constructions/renovation works.
- Water was supplied to priest house or to adjoining educational institution.
- Water was also supplied to snack, public toilet and private enterprise.
- Broken pipes and leakages were not repaired promptly.
- Taps were left open.
As of March 2008, the Ministry has not been able to implement any corrective measures to prevent abuses.

A scrutiny of monthly listings and reports revealed that there were still many cases where water consumption was above average.

Excessive water consumption was noted in several cases with increase of over 100 per cent over one year. In one case, there has been an increase of 424 per cent.

**Action taken by Ministry**

In January 2007, the Ministry commissioned a survey to be undertaken by CWA, based on new set of criteria to establish the eligibility of these organisations. Out of 1,424 institutions, 34 did not satisfy the new criteria while there were 92 new cases which were eligible.

**Actual Status**

The Ministry has recently sought the approval of Government regarding the adoption of the new set of criteria including the removal of the non eligible organisations mentioned above as well as extension of free water facility to the eligible ones.

A decision on this issue is yet to be taken.

Hence, as of September 2008, the same situation prevails and the expenditure is still being borne by the Ministry.

**Ministry’s Reply**

The Ministry is actually working on new proposals for consideration in the making of a revised policy decision by Government.