PARLIAMENT

REPUBLIC OF TRINIDAD AND TOBAGO

PAC

DRAFT THIRTY-FIRST REPORT OF THE

PUBLIC ACCOUNTS

C O M M I T T E E

FIFTH SESSION OF THE 11TH PARLIAMENT

Inquiry

Follow - up on the implementation of the recommendations in the Fifteenth Report of the Public Accounts Committee on the Examination of the Audited Financial Statements of the Water and Sewerage Authority of Trinidad and Tobago for the years 2008 to 2013.

Public Accounts Committee

The Public Accounts Committee (PAC) established by the Constitution of the Republic of Trinidad and Tobago in accordance with Section 119(4) is mandated to consider and report to the House of Representatives on:

"(a) appropriation accounts of moneys expended out of sums granted by Parliament to meet the public expenditure of Trinidad and Tobago;

(b) such other accounts as may be referred to the Committee by the House of Representatives or as are authorized or required to be considered by the committee under any other enactment; and

(c) the report of the Auditor General on any such accounts."

Current membership

Dr. Bhoendradatt Tewarie	Chairman
Mr. Taharqa Obika	Vice-Chairman
Mrs. Ayanna Webster-Roy	Member
Mr. Randall Mitchell	Member
Dr. Lester Henry	Member
Mrs. Paula Gopee-Scoon	Member
Mr. Adrian Leonce	Member
Mrs. Charrise Seepersad	Member

Committee Staff

The current staff members serving the Committee are:

Ms Keiba Jacob	Secretary to the Committee
Ms Hema Bhagaloo	Assistant Secretary to the Committee
Mr. Darien Buckmire	Graduate Research Assistant
Mr. Justin Jarrette	Graduate Research Assistant
Ms. Vanna Jankiepersad	Procedural Officer Intern
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Publication

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Dr. Bhoendradatt Tewarie
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Mr. Taharqa Obika
Vice-Chairman

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Member

Mr. Randall Mitchell
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Member

Dr. Lester Henry
Member

Mr. Adrian Leonce
Member

Mrs. Charrise Seepersad
Member

Executive Summary

The Public Accounts Committee (PAC) is the Parliamentary Financial Oversight Committee tasked with the responsibility of examining the issues outlined in the Report of the Auditor General and Audited Financial Statements of Ministries, Departments and Statutory Bodies referred to the Committee by the House of Representatives or as are authorized or required to be considered by the committee under any other enactment. The PAC presents its Thirty-First Report of the Eleventh Parliament which details its **follow-up on the implementation of the recommendations in the Fifteenth Report of the Public Accounts Committee on the Examination of the Audited Financial Statements of the Water and Sewerage Authority of Trinidad and Tobago for the years 2008 to 2013**.

During this inquiry, the following issues arose:

1. The mandate of the Water and Sewerage Authority (WASA);
2. The major achievements of the Water and Sewerage Authority (WASA;
3. The challenges experienced by the WASA in terms of service delivery, costing and funding;
4. The collaboration with the Inter-American Development Bank (IDB);
5. The oversight role of the Ministry of Public Utilities;
6. The sources of the water provided by the WASA;
7. The challenges of the demand and supply for water;
8. The issue of leakages in the system and the percentage of water loss;
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17. The status of the WASA's staffing expenditure;
18. The scheduling strategies implemented by the WASA to meet the challenges created by extreme dry weather;
19. The provisions of the Water and Sewerage Act Chap 54:40 regarding the WASA's power to temporarily prohibit or restrict use of hosepipes;
20. The enforcement measures implemented by WASA to ensure compliance with its restrictions;
21. The measures in place to strengthen the conservation initiatives through legislative amendments;

22. The expenditure control measures implemented by the Authority and the resulting savings;
23. The increase in the WASA's Age Receivable Accounts;
24. The status of the WASA's debt collection initiatives including the sale of property;
25. The logistical challenges faced by WASA in carrying out disconnections;
26. The cost and estimated timeframe of the Authority's plans to implement nationwide metering;
27. The importance of encouraging greater customer usage of the e-billing facility;
28. The need to improve the Authority's customer service initiatives;
29. The challenges leading to delays in road repair works;
30. The coordination of road works initiatives by the WASA and the Ministry of Works and Transport;
31. The status of the Authority's project management function;
32. The cost of desalinated water and the revenue derived therefrom;
33. The lost revenue associated with non-revenue water and the initiatives being conducted to address this issue;
34. The approaches to non-revenue water elsewhere in the Caribbean region;
35. The per capita water consumption in Trinidad and Tobago;
36. The risk assessment mechanisms used by the WASA;
37. The challenges of investigating suppliers of illegal truck borne water;
38. The Authority's register of Licensed Sanitary Constructors;
39. The criteria used to determine which customers pay their bills in US dollars;
40. The Authority's plans for increasing the water supply;
41. The optimal staffing levels needed at the WASA; and
42. The status of the WASA's Accounts Payable.

Based on the Committee's examination, the following observation was made:

- ***The Committee reminds the Authority of Section 40 of the Exchequer and Audit Act Chap. 69:01, which states that statutory bodies shall their audited accounts to the Minister with oversight for the body, 'not later than six months after the termination of each financial year of the statutory body' for subsequent laying in Parliament.***

Based on the Committee's examination, the following recommendations were proposed:

- ***WASA should submit the audited financial statements for FY 2015 and FY 2016 by August 30, 2020;***
- ***WASA should report to Parliament on the extent to which the External Audit Unit has measurably helped to expedite audits by August 30, 2020;***

- ***WASA should report to Parliament on the review of its distribution schedule and its initiatives to supply water more regularly to underserved areas by August 30, 2020;***
- ***WASA should report to Parliament on the following by August 30, 2020;***
    a. ***the difference between illegal water trucking and illegal sale of water, including whether those carrying out illegal water trucking do so free of charge; and***
    b. ***the challenges faced in gathering evidence in order to pursue cases against illegal water sellers.***
- ***WASA should submit a progress update on the repairs to the 900 remaining leaks by August 30, 2020;***
- ***WASA should provide Parliament with an analysis of the reduction of the percentage of water now lost due to leaks following the 79,000 repairs by August 30, 2020;***
- ***WASA should report to Parliament on the following by August 30, 2020;***
    a. ***the measurable effect of the repairs on revenue generation;***
    b. ***the measurable effect of the repairs on the level of water supply received by customers.***
- ***WASA should provide Parliament with a precise timetable for the scheduled 5-year installation of pressure valves and 10-year main replacement by August 30, 2020;***
- ***The Ministry of Public Utilities should report to Parliament on the following by August 30, 2020;***
    a. ***the feasibility of setting leak reduction targets; and***
    b. ***the possibility of WASA repairing customer side leaks for a fee or establishing a system whereby this may be done by the licensed sanitary constructors.***
- ***WASA should report to Parliament on the following by August 30, 2020;***
    a. ***the number of consumers receiving water through asbestos cement pipelines and the percentage of WASA's total number of consumers that this represents;***
    b. ***the Authority's assessment of the level of health risk posed by the continued use of this material; and***
    c. ***a precise timetable for the removal and replacement of all remaining asbestos cement pipelines.***
- ***WASA should report to Parliament on the following by August 30, 2020;***
    a. ***the weaknesses in the implementation of its Anti-Fraud Policy and Code of Ethics which made it possible for fraud to continue; and***
    b. ***the ways in which the Anti-Fraud Policy and Code of Ethics could be strengthened.***
- ***The Ministry of Public Utilities should report to Parliament on the possible support it could provide to WASA in the strengthening of its Anti-Fraud Policy and Code of Ethics by August 30, 2020;***
- ***WASA should report to Parliament on the following regarding the Supervisory Control and Data Acquisition (SCADA) technology by August 30, 2020;***

   a. ***the expected effect of the introduction of SCADA on staffing numbers;***
   b. ***the cost of SCADA in comparison to the savings to be realised from reduced staff numbers; and***
   c. ***the number of Water Treatment Process Plants at which the SCADA technology will be introduced.***

- ***WASA should submit to Parliament a list of any other technologies being considered, including the cost and benefits of introducing them by August 30, 2020;***
- ***WASA should report to Parliament on the long term sustainability of the recruitment freeze by August 30, 2020;***
- ***WASA should report to Parliament on the decision made regarding the implementation of the shift system and submit the official shift system policy as well as an estimate for the average savings it would facilitate by August 30, 2020;***
- ***WASA should provide Parliament with a progress report on its metering drive and the effect on revenue by August 30, 2020;***
- ***WASA should provide a progress report to Parliament on the work of the debt collector on social sector receivables and the amounts collected due to their work by August 30, 2020;***
- ***WASA should report to Parliament on the arrangements agreed to for the continued recovery of outstanding sums from public sector entities by August 30, 2020;***
- ***WASA should provide Parliament with a progress report on the approval by the Board of the Revised Bad Debts Write-Off Policy by August 30, 2020; and***
- ***WASA should report to Parliament on the feedback received from the Ministry of Public Utilities and the projected revenue increases that would be facilitated by the requested rate review by August 30, 2020.***

Introduction

The PAC of the Eleventh Republican Parliament was established by resolutions of the House of Representatives and the Senate at the sittings held on Friday November 13, 2015 and Tuesday November 17, 2015 respectively.

The Constitution of the Republic of Trinidad and Tobago mandates that the Committee shall consider and report to the House on appropriation accounts of monies expended out of sums granted by Parliament to meet the public expenditure of Trinidad and Tobago and the report of the Auditor General on any such accounts.

In addition to the Committee's powers entrenched in the Constitution, the Standing Orders of the House of Representatives and of the Senate also empower the Committee, inter alia, to:

a) send for persons, papers and records;
b) have meetings whether or not the House is sitting;
c) meet in various locations;
d) report from time to time; and
e) communicate with any other Committee on matters of common interest.

Election of the Chairman and Vice-Chairman

In accordance with section 119(2) of the Constitution, the Chairman must be a member of the Opposition in the House. At the first meeting held on Wednesday December 2, 2015 Dr Bhoendradatt Tewarie was elected Chairman of the Committee. Mr. Taharqa Obika was elected Vice-Chairman of the Committee on December 13, 2017.

Establishment of Quorum

The Committee is required by the Standing Orders to have a quorum so that any decisions made by the Members during the meetings can be considered valid. A quorum of three (3) Members, inclusive of the Chair or Vice-Chairman, with representatives from both Houses was agreed to by the Committee at its First Meeting.

Determination of the Committee's Work Programme

The Committee agreed to a work programme for the Fifth Session of the Eleventh Parliament during its thirty-seventh meeting held on Wednesday September 11, 2019. These entities are:

1. National Library and Information System Authority (NALIS);
2. Ministry of Energy and Energy Industries (MEEI) and Ministry of Finance (MoF) (Revenue Collection);
3. National Insurance Board of Trinidad and Tobago (NIB);
4. Caribbean Industrial Research Institute (CARIRI);
5. College of Science, Technology and Applied Arts of Trinidad and Tobago (COSTAATT);
6. Sports and Culture Fund;

7. Follow-up:
    - Water and Sewerage Authority
    - Trinidad and Tobago Electricity Commission
    - Airport Authority of Trinidad and Tobago
    - Chaguaramas Development Authority
    - Land Settlement Agency
    - Public Transport Service Corporation
    - National Lotteries Control Board
    - Trinidad and Tobago Bureau of Standards
8. Trinidad and Tobago Civil Aviation Authority;
9. Trinidad and Tobago Securities Exchange Commission; and
10. Trinidad and Tobago Unit Trust Corporation

WASA submitted responses to the Committee's follow-up questions on the implementation of the recommendations in the Fifteenth Report of the Public Accounts Committee on the Examination of the Audited Financial Statements of the Water and Sewerage Authority of Trinidad and Tobago for the years 2008 to 2013. Following this, the Committee agreed to invite the WASA and the Ministry of Public Utilities to a public hearing to discuss the implementation of the aforementioned recommendations. This public hearing was held on February 12, 2020.

The Inquiry Process

The Inquiry Process comprises the steps taken by the Committee in its follow-up on the implementation of the recommendations in the Fifteenth Report of the Public Accounts Committee on the Examination of the Audited Financial Statements of the Water and Sewerage Authority of Trinidad and Tobago for the years 2008 to 2013. The Inquiry Process agreed to by the PAC included the following steps:

I. Identified issues in the responses to the follow-up questions on the implementation of the recommendations in the Fifteenth Report of the Public Accounts Committee on the Examination of the Audited Financial Statements of the Water and Sewerage Authority of Trinidad and Tobago for the years 2008 to 2013;

II. Conducted a public hearing to which the relevant witnesses were invited to attend and provide evidence on Wednesday February 12, 2020;

III. Forwarded questions for additional information to the WASA on February 17, 2020 and received responses on May 12, 2020;

IV. Reporting the Committee's findings and recommendations to Parliament upon conclusion of the inquiry; and

V. Carrying out further follow-up to monitor progress in the implementation of recommendations.

Background: Water and Sewerage Authority

Establishment[1]

The Water and Sewerage Authority (WASA) was established in 1965 by the Water &. Sewerage Act, Chapter 54:40.

Mandate[2]

Water Security for Every Sector. Deliver it, Sustain it.

Mission[3]

- To be a leading provider of water and wastewater services.
- To deliver customer service along the highest internationally recognised and accepted standards.
- To continuously develop best business practices utilizing advanced technology and a well-developed and motivated workforce.
- To leverage on industry expertise to offer global water and wastewater services
- To sustain a commercialised business while remaining sensitive to our stakeholders and our environment.

Vision[4]

To be the best performing water utility in the Western Hemisphere.

Core Values[5]

- **Respect:** Treating its stakeholders equally with appreciation and value, devoid of discrimination as diversity is recognized, in the inherent worth of every human being.
- **Integrity:** Conducting its business with honesty, transparency and accountability, placing the public interest above personal interest.
- **Excellence:** Providing the best quality service and customer care that would translate into satisfaction and sustainability.
- **Professionalism:** Preserving its corporate image through people who are self-regulated, committed to upholding the highest standards and are examples that positively influence and enhance the communities in which we operate.

[1] WASA website: https://www.wasa.gov.tt/Forms/Policies/Trinidad_and_Tobago-Water_and_Sewerage_Act_(1980).pdf accessed June 8, 2020.
[2] WASA website, About Us : https://www.wasa.gov.tt/WASA_AboutUs_visionmission.html accessed June 8, 2020
[3] Ibid
[4] Ibid
[5] Ibid

- **Trust:** Being truthful in its declarations, to be ethical in conducting business and building relationships based on mutual respect.

Guiding Principles[6]

- We must never violate any applicable laws and regulations.
- We must never knowingly put employees, customers or business partners, stakeholders at risk.
- We must never do anything that may damage the Authority's image, reputation or bring the Authority into disrepute.

The Four Development Pillars[7]

1. Human Capital Development:
    - Build capable workforce;
    - Build human capacity; and
    - Establish a culture of performance.
2. Customer Care:
    - Improve wastewater service;
    - Improve water service; and
    - Implement demand management.
3. Cost optimisation:
    - Build capable workforce;
    - Build human capacity; and
    - Establish a culture of performance.
4. Revenue Enhancement:
    - Achieve financial sustainability.

[6] Ibid.
[7] Ibid.

Issues, Observations and Recommendations

During the follow-up questions on the implementation of the recommendations in the Fifteenth Report of the Public Accounts Committee on the Examination of the Audited Financial Statements of the Water and Sewerage Authority of Trinidad and Tobago (WASA or the Authority) for the years 2008 to 2013, the Committee identified the following issues, made the following observations and proposed the following recommendations:

1. Outstanding Audited Financial Statements

WASA has not submitted audited financial statements since FY 2015. The audit of the financial statement for FT 2015 was completed 2019. The audit of the financial statement for FY 2016 was expected to be completed in June 2020, while those for FY 2017 and FY 2018 were expected to be completed in December 2020. The audit of the FY 2019 financial statement was expected to be completed by September 2021.

The Authority explained that the delay in the completion of the aforementioned audits was due to the need for additional testing following the adoption of a new accounting software in 2014. Following this initial delay, all subsequent audits started later than usual. To ensure that this issue does not reoccur, WASA established an External Audit Unit to expedite the planning, scheduling and administrative aspects of external audits and ensure all necessary information is provided.

Observation:

- ***The Committee reminds the Authority of Section 40 of the Exchequer and Audit Act Chap. 69:01, which states that statutory bodies shall their audited accounts to the Minister with oversight for the body, 'not later than six months after the termination of each financial year of the statutory body' for subsequent laying in Parliament.***

Recommendations:

- ***WASA should submit the audited financial statements for FY 2015 and FY 2016 by August 30, 2020; and***
- ***WASA should report to Parliament on the extent to which the External Audit Unit has measurably helped to expedite audits by August 30, 2020.***

2. Illegal Supplies of Water

There are enforcement gaps in efforts to curb illegal supplies of water. The increased scarcity of water in some communities due to the severe dry season. Complaints received by WASA for illegal connections and other irregular practices reached a peak in 2019. The increased number of complaints was facilitated at least in part by WASA's efforts to raise awareness of the reporting system available to the public. WASA prepared a list of areas prone to water shortage for extended periods. In its 15th Report the Committee recommended that WASA target those listed areas to provide water on a predictable basis so as to eliminate the market for illegal suppliers of truck borne water. The Authority was conducting a review of distribution schedules to increase the regularity of supply to underserved areas from the second quarter of 2020 onward.

Section 43(1) of the Water and Sewerage Act Chap. 54:40 provides for the designation of persons to supply water as 'water purveyors' by the Authority. According to the Authority, action was taken against those found to be illegally supplying truck borne water and against those found to have illegal connections. However, there were no prosecutions for the Illegal sale of water i.e. those acting as 'water purveyors' without WASA's authorisation. This was due to insufficient evidence.

Recommendations:

i. ***WASA should report to Parliament on the review of its distribution schedule and its initiatives to supply water more regularly to underserved areas by August 30, 2020; and***
ii. ***WASA should report to Parliament on the following by August 30, 2020:***
    a. ***the difference between illegal water trucking and illegal sale of water, including whether those carrying out illegal water trucking do so free of charge; and***
    b. ***the challenges faced in gathering evidence in order to pursue cases against illegal water sellers;***

3. Management of Leaks

Leaks on both WASA's pipes and on customer-owned pipes cause significant wastage of water and hinder the Authority's revenue generation. This lost water is referred to as 'non-revenue water'. In its 15th Report, the Committee recommended that WASA identify strategies to manage the issues leading to losses. The Ministerial Response to the Report included leaks as one such loss causing issue. High water pressure and ageing pipeline infrastructure were identified as a factor contributing to leaks. At the public hearing[8], WASA explained that approximately 45% of water is lost through leaks. WASA also indicated that, from 2016 to 2020, 79,000 leaks had been repaired, with 900 still to be repaired. WASA also highlighted during the hearing[9] that some leaks are on the consumer side, such as leaking tanks or pipes on private property, which are not under WASA's control, and that the 45% loss figure includes this.

To address the issue, pressure management through the installation of Pressure Regulating Valves (PRV) and Pressure Safety Valves (PSV) was being conducted. Almost one-third of WASA's

[8] Verbatim Notes, 40th Meeting of the Public Accounts Committee, page 11.
[9] Ibid

pipeline network is over 60 years old[10]. The Authority plans to replace high leakage mains and aged mains. These are long term measures, with the pressure valves scheduled to be installed over a 5-year period, while the replacement of high leakage and aged mains would occur over a 10-year period.

The Committee notes the practice in other jurisdictions, where leak reduction targets[11] are set by Government Ministries and integrated into the Business Plans of water suppliers. In these jurisdictions, the importance of curbing customer side leaks is highlighted and water suppliers are also encouraged to conduct repairs to these leaks, most often for a fee[12]. At the hearing, WASA indicated[13] that there is a list of licensed sanitary constructors who are approved to carry out various types of work related to water infrastructure.

Recommendations:

i. ***WASA should submit a progress update on the repairs to the 900 remaining leaks by August 30, 2020;***
ii. ***WASA should provide Parliament with an analysis of the reduction of the percentage of water now lost due to leaks following the 79,000 repairs by August 30, 2020;***
iii. ***WASA should report to Parliament on the following by August 30, 2020;***
    a. ***the measurable effect of the repairs on revenue generation;***
    b. ***the measurable effect of the repairs on the level of water supply received by customers.***
iv. ***WASA should provide Parliament with a precise timetable for the scheduled 5-year installation of pressure valves and 10-year main replacement by August 30, 2020; and***
v. ***The Ministry of Public Utilities should report to Parliament on the following by August 30, 2020:***
    a. ***the feasibility of setting leak reduction targets; and***
    b. ***the possibility of WASA repairing customer side leaks for a fee or establishing a system whereby this may be done by the licensed sanitary constructors.***

4. WASA's Pipeline Infrastructure

In addition to the need for new infrastructure to curb leaks, there are health and safety concerns. As previously mentioned, around one-third of WASA's pipeline infrastructure is over 60 years old. The Committee notes with concern that – as detailed in the Authority's *Report on*

[10] WASA written submission dated February 3, 2020, Appendix 5, pages 2-3.
[11] House of Commons Library, Future of the Water Industry in England and Wales: <file:///C:/Users/Juan%20Marco/Downloads/CDP-2019-0008.pdf> accessed on June 16, 2020.
[12] UK Parliament, Regulation of Water Industry: Government and OFWAT Responses to the Committee's Eighth Report <https://publications.parliament.uk/pa/cm201719/cmselect/cmenvfru/1856/185602.htm>accessed June 17, 2020.
[13] Verbatim Notes, 40th Meeting of the Public Accounts Committee, page 42.

Aged Infrastructure and High Leakage Pipelines – within that one-third of old infrastructure, some 6% is made up of asbestos cement pipelines.

The long term health risks associated with asbestos exposure are well-documented internationally[14]. The dangers of this substance are also addressed in Schedule 1 of the Occupational Safety and Health Act Chap. 88:08, where asbestos is listed as a cause of occupational diseases. Studies have also been conducted in other jurisdictions[15] on the possible dangers posed to consumers by the use of asbestos cement pipelines for supplying water. All of this appears to go against WASA's guiding principle to 'never knowingly put employees, customers or business partners, stakeholders at risk'.

Recommendation:

i. WASA should report to Parliament on the following by August 30, 2020:

a. the number of consumers receiving water through asbestos cement pipelines and the percentage of WASA's total number of consumers that this represents;

b. the Authority's assessment of the level of health risk posed by the continued use of this material; and

c. a precise timetable for the removal and replacement of all remaining asbestos cement pipelines.

5. Anti-Fraud Measures

Cases of fraud go against the Authority's guiding principle of avoiding damage to the its image and reputation, and compromise the Authority's core value of integrity. WASA explained that fraud awareness among employees is strengthened through sensitization campaigns. Measures to address fraud are led by the Investigations Oversight Committee (IOC), comprised of the CEO and Heads of Departments including Internal Audit and Human Resources in addition to external experts where needed.

The Authority has an Anti-Fraud Policy, which was drafted in 2012, revised in 2013 and approved on February 10, 2015 by the Chairman of the Board of Commissioners and the Chief Executive Officer (CEO)[16]. The purpose of the Policy was to prevent fraud, protect WASA's assets and set the parameters of dealing with instances of fraud when detected.

[14] United Kingdom Health and Safety Executive, Why is Asbestos Dangerous? <https://www.hse.gov.uk/asbestos/dangerous.htm> accessed June 19, 2020.

[15] United States National Library of Medicine, The Use of Asbestos Cement Pipe for Public Water Supply and the Incidence of Cancer in Selected Communities in Utah < https://pubmed.ncbi.nlm.nih.gov/6480892/> accessed June 19, 2020.

[16] WASA responses to questions for additional information dated May 12, Appendix 7.

Fraud prevention measures under the Anti-Fraud Policy involve fully integrating internal controls into WASA's policies and transactions. The Policy aims to make employees more comfortable with reporting suspected fraud and more confident in the investigation process. The Authority conducted its most recent Corporate Culture Survey in 2018 to assess employees' attitudes about tackling corruption. However, the Committee notes that unwillingness[17] of employees to assist with fraud investigations remains a major challenge which delays the Authority's anti-fraud investigations.

WASA's Code of Ethics was implemented in January 2014. The Code is based on the Authority's three (3) Guiding Principles (see page 11), which are to obey laws and regulations, to protect internal and external stakeholders from being put at risk and to protect the Authority's image and reputation, as mentioned above. The Code also aims to support WASA's Core Values of respect, integrity, excellence, professionalism and trust (see page 10). The Code of Ethics emphasizes, inter alia, the need for employees to understand and comply with laws, as well as the importance of effective internal controls.

There are 6 WASA employees on suspension for suspected fraud. These employees have been on suspension for over 3 years on average. In addition to the ethical implications of fraud, there is an economic cost for the Authority; while they have not been contributing to the fulfilment of WASA's mandate due to their suspension, the 6 officers have received almost $9 Mn remuneration so far. This includes $ 7.6 Mn in salary and $1.3 Mn in allowances.

The suspected fraudulent activities took place after the Anti-Fraud Policy and the Code of Ethics became effective. This raises the question of whether the systems in place need to be strengthened.

Recommendations:

- ***i. WASA should report to Parliament on the following by August 30, 2020:***
    - ***a. the weaknesses in the implementation of its Anti-Fraud Policy and Code of Ethics which made it possible for fraud to continue; and***
    - ***b. the ways in which the Anti-Fraud Policy and Code of Ethics could be strengthened.***
- ***ii. The Ministry of Public Utilities should report to Parliament on the possible support it could provide to WASA in the strengthening of its Anti-Fraud Policy and Code of Ethics by August 30, 2020.***

[17] WASA written submission dated February 3, 2020, page 91.

6. Overstaffing

The use of new technologies can help WASA to attain the regional average for optimum staffing levels. The Authority's desired staffing levels is 10 employees per one thousand 1,000 water and wastewater connections as opposed to the regional average of 8 employees per 1,000 connections. One of the reasons given for this is that WASA engages in a great deal of labour intensive operations due to the fact that it is not as technologically advanced as its counterparts that function with 8 employees per 1,000 connections.

The Authority explained that the Collective Agreement with the Public Services Association (PSA) provides for an increase in the number of plants that are automated through the use of the relevant technology, thus, requiring less staff to operate these Process Plants.

One element of WASA's Mission is to 'continuously develop best business practices utilizing advanced technology and a well-developed and motivated workforce'. Closely related to this aim, in a written submission, the Authority indicated that it was considering introducing new technology and software systems to reduce its reliance on physical manpower. In particular, the introduction of Supervisory Control and Data Acquisition (SCADA) technology to monitor and control the Water Treatment Process Plants was being considered.

Recommendations:

i. ***WASA should report to Parliament on the following regarding the Supervisory Control and Data Acquisition (SCADA) technology by August 30, 2020; and***
    a. ***the expected effect of the introduction of SCADA on staffing numbers;***
    b. ***the cost of SCADA in comparison to the savings to be realised from reduced staff numbers; and***
    c. ***the number of Water Treatment Process Plants at which the SCADA technology will be introduced.***
ii. ***WASA should submit to Parliament a list of any other technologies being considered, including the cost and benefits of introducing them by August 30, 2020.***

7. Expenditure Control

The benefits of WASA efforts to control costs are being neutralised in the short term by unavoidable expenses. Cost optimization is one of the Authority's Four Development Pillars.

- Build capable workforce;
- Build human capacity; and
- Establish a culture of performance.

Recruitment Freeze and Retirement Costs

There was freeze on recruitment at the Authority regarding positions deemed non-critical. The Committee notes that WASA Development Pillar 3, cost optimisation, emphasises building a capable workforce. The recruitment of a small number of crucial staff within the context of the recruitment freeze therefore appears to be in line with the aim of ensuring capable workforce is maintained. The recruitment freeze in addition to the departure (including retirements, resignations and deaths) of staff, led to savings of $2.87 Mn from 2015 to 2020. However, statistics provided by the Authority show that employees accessing early retirement will cost over $134 Mn for period 2020 to 2022.

Overtime

WASA's overtime bill increased by 7% from FY 2017 ($125.4 Mn) to FY 2018 ($134 Mn) and then remained mostly stable with a further 1% increase in FY 2019 ($135.4 Mn). Along with the cost of overtime hours, the Authority explained that backhoes had to be procured at a cost of $4 Mn for use during overtime hours. This is because external contractors are no longer willing to work for WASA due to outstanding payments owed to them.

WASA indicated that the increased overtime bill was partly due to the volume of work needed for the road restoration drive, which is scheduled for completion in the first quarter of FY 2021. One overtime reduction strategy being implemented is flexible working hours whereby crews will operate outside of normal working hours, without the Authority necessarily incurring overtime cost.

In a written submission, the Authority explained that discussions were ongoing with the Unions towards a new Collective Agreement for the period 2014-2016. The implementation of a new shift system was part of the discussions, which were scheduled to be completed by July 31, 2020. This shift system is what would facilitate work outside of normal hours without overtime being incurred.

Recommendations:

1. ***WASA should report to Parliament on the long term sustainability of the recruitment freeze by August 30, 2020; and***
2. ***WASA should report to Parliament on the decision made regarding the implementation of the shift system and submit the official shift system policy as well as an estimate for the average savings it would facilitate by August 30, 2020.***

8. Revenue Collection

Ensuring robust collection will further the aim of achieving financial sustainability in accordance with the Authority's Development Pillar 4, revenue enhancement. A number of initiatives were being pursued, but debt was not recoverable in all cases.

Disconnections

The Authority reported that from July 2019 to January 2020, 93 customers were disconnected for extended non-payment of bills, meaning customers whose accounts are in arrears of more than two (2) billing periods. In 88 of the 93 cases, disconnection led to outstanding sums being paid.

To facilitate disconnections, curb valves were due to be installed to effect disconnection of customers with arrears over $1,500. The Authority aimed to install up to 50 curb valves per week, at an estimated installation cost of $3,000 per curb valve.

The Expansion of Metering

Only around 5% of residential customers are metered, as there were previously funding challenges. The Ministry of Public Utilities planned to extend metering to all of its customers as part of a water management plan in collaboration with the Inter-American Development Bank (IDB).

Public Sector Receivables

Around one-eighth of WASA's receivables were attributed to the public sector. WASA's Public Sector Receivables increased by 34% from FY 2017 to FY 2018 and by 24% in FY 2019, reaching $106.6 Mn. Following discussions with Ministries, Departments and Agencies (MDA) as well as State Enterprises to reduce public sector receivables, the Authority collected $36.8 Mn.

Social Segment Receivables

This refers to standpipe accounts and represents 5.8% or $47.90Mn of the Authority's overall receivables. The Authority engaged a debt collector to assist with reduction of receivables from the social segment, over a 9-month period.

Sale of Property

WASA began property sales as a means of debt recovery in July 2019. The sum of $593,103.27 has been collected to date.

Write-Off of Bad Debts

The last time the Authority wrote off bad debts was in June 2011 in the amount of $12,416,547.36. The Revised Bad Debts Write-Off Policy was due to be implemented in February

2020 following Board approval by the third quarter of FY 2019 but this was not done. Amendments were being made to the Authority's Bad Debt Write-Off Policy for compliance with Internal Financial Reporting Standards (IFRS).

Recommendations:

i. ***WASA should provide Parliament with a progress report on its metering drive and the effect on revenue by August 30, 2020;***
ii. ***WASA should provide a progress report to Parliament on the work of the debt collector on social sector receivables and the amounts collected due to their work by August 30, 2020;***
iii. ***WASA should report to Parliament on the arrangements agreed to for the continued recovery of outstanding sums from public sector entities by August 30, 2020; and***
iv. ***WASA should provide Parliament with a progress report on the approval by the Board of the Revised Bad Debts Write-Off Policy by August 30, 2020.***

9. Rate Review

In its Response to the recommendations made in the Committee's 15th Report, the Ministry of Public Utilities (MPU) stated that WASA's financial viability depended on its ability to increase revenue while limiting expenditures. A rate review is one measure that would enable the Authority to raise more revenue. This is all the more relevant as the most recent rate review was conducted in 1993. The Authority submitted its Draft Business Plan to facilitate a rate review by the Regulated Industries Commission (RIC) to the MPU for comments. At the time of WASA's initial written submission to the Committee, the Authority had not yet received comments from the MPU. It was then indicated in a later submission that the comments had been received.

Recommendation:

i. ***WASA should report to Parliament on the feedback received from the Ministry of Public Utilities and the projected revenue increases that would be facilitated by the requested rate review by August 30, 2020.***

Concluding Remarks

WASA's mission is to be a leading provider of water and wastewater services. Many improvements need to be made for the Authority to progress towards this aim. In many cases the relevant initiatives are medium to long term ones. As such their benefits may take some time to become apparent. It is therefore crucial that all necessary initiatives to reduce costs, increase collection, strengthen the water supply, repair and replace infrastructure and ensure ethical functioning of the Authority be launched as a matter of urgency. The entire nation depends on WASA, as customers do not have the option of choose their desired water supplier. This underlines the great responsibility that WASA has to deliver quality service and value for money to its customers.

It makes no sense for WASA to have half of its water being supplied to customers leaking out as wastage every day. WASA cannot continue to operate with low pressure making it impossible for water to climb up hill to some communities and unable to reach the extremities of communities when supplied so that even when communities do get water, not all households in these communities are served. Moreover, it was revealed by WASA that high pressure in the pipes can burst the pipes causing more wastage, demanding more repair and causing greater havoc.

It is clear that WASA cannot continue as is. WASA cannot spend the next decade fixing leaks, running at low pressure and living with daily wastage of half of its water supply. Lines need to be replaced to create an effective system that can guarantee delivery of the supply of 90% of its distribution on any given day. WASA needs an effective distribution that works.

But the pre-supply and distribution issues are also critical – the system of water capture needs to be thought through and enhanced. The cycle of heavy rains leading to floods and no rain leading to drought conditions and water rationing need to be addressed with thought, solutions and effective management.

WASA needs to increase water capture, make arrangements for an effective efficient modern distribution system, manage effectively water capture in the rainy season, and curb the unacceptable gallons of wastage and the unacceptable, unpredictable undersupply of water to citizens.

WASA needs to bring costs under control, improve productivity at the level of the office as well as on the field. And WASA has to have a plan with a timeline to supply 100% of the country's needs on a 24/7 basis and to reduce and to eliminate its financial dependence on the State.

These are some of the Committees' conclusions and recommendations.

This Committee respectfully submits this Report for the consideration of the Parliament.

Dr. Bhoendradatt Tewarie
Chairman

Mr. Taharqa Obika
Vice-Chairman

Mrs. Ayanna Webster-Roy
Member

Mr. Randall Mitchell
Member

Mr. Adrian Leonce
Member

Mrs. Paula Gopee-Scoon
Member

Dr Lester Henry
Member

Mrs. Charrise Seepersad
Member

Appendix I – Witnesses

The following witnesses attended the meeting held on Wednesday February 12, 2020:

Ministry of Public Utilities

- Ms. Beverly Khan - Deputy Permanent Secretary
- Ms. Sara Jade Govia - Water Sector Specialist
- Ms. Janette St. Hilaire - Financial Analyst
- Ms. Arlene Collis - Senior Economist

Water and Sewerage Authority

- Mr. Romney Thomas - Chairman
- Mr. Alan Poon King - Chief Executive Officer
- Mr. Dion Abdool - General Counsel and Corporate Secretary
- Ms. Rachelle Wilkie - Director of Finance
- Mr. Sherland Sheppard - Director of Operations
- Ms. Denise Lee Sing- Pereira - Director Programmes and Change Management
- Mr. Aldwin Browne - Director of Corporate Services
- Mr. Ronnie Spences - Head, Workforce Planning and Organizational Development
- Ms. Sherry Dumas-Harewood - Director, Customer Care
- Ms. Arlene Johnson- Lawrence - Head, Procurement
- Mr. Robert Subryan - Head, Internal Audit and Compliance
- Mr. Rajindra Gosine - Head, Water Resources Agency

THE PUBLIC ACCOUNTS COMMITTEE –
FIFTH SESSION, ELEVENTH PARLIAMENT
MINUTES OF THE FORTIETH MEETING HELD ON WEDNESDAY, FEBRUARY 12, 2020 AT 10:06 A.M.
IN THE COMMITTEE MEETING ROOM, GROUND FLOOR, CABILDO CHAMBERS, PARLIAMENTARY COMPLEX, ST VINCENT STREET, PORT-OF-SPAIN.

Present were:

Dr. Bhoendradatt Tewarie	-	Chairman
Mr. Taharqa Obika	-	Vice - Chairman
Dr. Lester Henry	-	Member
Mr. Randall Mitchell	-	Member
Ms. Charrise Seepersad	-	Member
Mr. Adrian Leonce	-	Member
Mrs. Paula Gopee-Scoon	-	Member

Ms. Hema Bhagaloo	-	Assistant Secretary
Ms. Vanna Jankiepersad	-	Procedural Officer Intern
Mr. Justin Jarrette	-	Graduate Research Assistant

Excused was:

Mrs. Ayanna Webster-Roy	-	Member

COMMENCEMENT

1.1 At 10:06 a.m. the Chairman called the meeting to order and welcomed those present. The Chairman informed the Members that Mrs. Ayanna Webster-Roy asked to be excused from the Meeting.

THE EXAMINATION OF THE MINUTES OF THE THIRTY-NINTH MEETING

2.1 The Committee examined the Minutes of the Thirty-Ninth (39^{th}) Meeting held on Wednesday November 27, 2019.

2.2 There being no omissions or corrections, the Minutes were confirmed on a motion moved by Ms. Charrise Seepersad and seconded by Mr. Adrian Leonce.

MATTERS ARISING FROM THE MINUTES OF THE THIRTY- NINTH MEETING

3.1 With reference to item 3.2, the Chairman informed Members that the responses to the questions for additional information were received from the Auditor General's Department and NALIS on November 27, 2019 and December 16, 2019 respectively and used to draft the Twenty-Ninth Report.

3.2 With reference to item 5.4, the Chairman informed the Members that questions for additional information were sent to the following entities:

- Ministry of Energy and Energy Industries;
- Ministry of Finance;
- Ministry of the Attorney General and Legal Affairs;
- Director of Personnel Administration; and
- Public Management Consulting Division.

The responses to the questions for additional information were received by the Secretariat and used to draft the Thirtieth Report of the Committee.

PRE-HEARING DISCUSSION RE: WATER AND SEWERAGE AUTHORITY OF TRINIDAD AND TOBAGO

4.1 The Chairman informed Members that the purpose of the meeting was to follow up on the implementation of the recommendations in the Fifteenth Report of the Public Accounts Committee on the Examination of the Audited Financial Statements of the Water and Sewerage Authority of Trinidad and Tobago for the years 2008 to 2013.

4.2 The Chairman invited Members to review the Issues Paper based on the written submission received by the Water and Sewerage Authority of Trinidad and Tobago.

4.3 The Chairman invited Members to raise any issues or questions on the examination into the implementation of the recommendations in the Fifteenth Report of the Public Accounts Committee on the Examination of the Audited Financial Statements of the Water and Sewerage Authority of Trinidad and Tobago for the years 2008 to 2013. The Members discussed the issues of concern and the general approach for the public hearing.

OTHER BUSINESS

5.1 Member Seepersad proposed that the Committee consider incorporating some of the best practices shared at the Regional Workshop of the Commonwealth Association of Public Accounts Committees (CAPAC) attended by the Chairman and herself in January 2020. These include the following:

- extra time for pre-hearing discussions;
- advance planning for upcoming meetings; and
- adopting a lead member system for questioning where Members each take ownership of questioning on specific issues.

A change in the time for the in-camera meeting from 10:00 a.m. to 9:30 a.m. was suggested to give Members an opportunity to plan for the next meeting of the Committee and also to share their views on the information provided by the Secretariat for the public hearing. A discussion ensued on the matter. The Committee agreed to the change in time to 9:30 a.m.

5.2 There being no further business for discussion *in camera*, the Chairman suspended the meeting at 10:37 a.m.

FOLLOW UP ON THE IMPLEMENTATION OF THE RECOMMENDATIONS IN THE FIFTEENTH REPORT OF THE PUBLIC ACCOUNTS COMMITTEE ON THE EXAMINATION OF THE AUDITED FINANCIAL STATEMENTS OF THE WATER AND SEWERAGE AUTHORITY OF TRINIDAD AND TOBAGO FOR THE YEARS 2008 TO 2013

6.1 The Chairman called the public meeting to order at 10:44 a.m.

6.2 The following officials joined the meeting:

Ministry of Public Utilities

- Ms. Beverly Khan - Deputy Permanent Secretary
- Ms. Sara Jade Govia - Water Sector Specialist
- Ms. Janette St. Hilaire - Financial Analyst
- Ms. Arlene Collis - Senior Economist

Water and Sewerage Authority

- Mr. Romney Thomas - Chairman
- Mr. Alan Poon King - Chief Executive Officer
- Mr. Dion Abdool - General Counsel and Corporate Secretary
- Ms. Rachelle Wilkie - Director of Finance

- Mr. Sherland Sheppard - Director of Operations
- Ms. Denise Lee Sing- Pereira - Director Programmes and Change Management
- Mr. Aldwin Browne - Director of Corporate Services
- Mr. Ronnie Spences - Head, Workforce Planning and Organizational Development
- Ms. Sherry Dumas-Harewood - Director, Customer Care
- Ms. Arlene Johnson- Lawrence - Head ,Procurement
- Mr. Robert Subryan - Head, Internal Audit and Compliance
- Mr. Rajindra Gosine - Head, Water Resources Agency

6.3 Key Topics Discussed:

43. The mandate of the Water and Sewerage Authority (WASA);
44. The major achievements of the Water and Sewerage Authority (WASA;
45. The challenges experienced by the WASA in terms of service delivery, costing and funding;
46. The collaboration with the Inter-American Development Bank (IDB);
47. The oversight role of the Ministry of Public Utilities;
48. The sources of the water provided by the WASA;
49. The challenges of the demand and supply for water;
50. The issue of leakages in the system and the percentage of water loss;
51. The percentage of leaks that were repaired;
52. The challenges of detecting leakages and repair initiatives conducted by the WASA;
53. The new technologies used by the WASA to detect leakages;
54. The status of the Authority's outstanding financial statements since FY 2014;
55. The infrastructural challenges affecting water loss by the WASA;
56. The annual losses incurred by the WASA;
57. The breakdown of the WASA's annual expenditure and revenue on a cash basis;
58. The water conservation public education initiatives carried out by the WASA;
59. The status of the WASA's staffing expenditure;
60. The scheduling strategies implemented by the WASA to meet the challenges created by extreme dry weather;
61. The provisions of the Water and Sewerage Act Chap 54:40 regarding the WASA's power to temporarily prohibit or restrict use of hosepipes;
62. The enforcement measures implemented by WASA to ensure compliance with its restrictions;
63. The measures in place to strengthen the conservation initiatives through legislative amendments;

64. The expenditure control measures implemented by the Authority and the resulting savings;
65. The increase in the WASA's Age Receivable Accounts;
66. The status of the WASA's debt collection initiatives including the sale of property;
67. The logistical challenges faced by WASA in carrying out disconnections;
68. The cost and estimated timeframe of the Authority's plans to implement nationwide metering;
69. The importance of encouraging greater customer usage of the e-billing facility;
70. The need to improve the Authority's customer service initiatives;
71. The challenges leading to delays in road repair works;
72. The coordination of road works initiatives by the WASA and the Ministry of Works and Transport;
73. The status of the Authority's project management function;
74. The cost of desalinated water and the revenue derived therefrom;
75. The lost revenue associated with non-revenue water and the initiatives being conducted to address this issue;
76. The approaches to non-revenue water elsewhere in the Caribbean region;
77. The per capita water consumption in Trinidad and Tobago;
78. The risk assessment mechanisms used by the WASA;
79. The challenges of investigating suppliers of illegal truck borne water;
80. The Authority's register of Licensed Sanitary Constructors;
81. The criteria used to determine which customers pay their bills in US dollars;
82. The Authority's plans for increasing the water supply;
83. The optimal staffing levels needed at the WASA; and
84. The status of the WASA's Accounts Payable.

Please see Verbatim Notes for the detailed oral submission by the witnesses.

6.4 The Committee agreed that additional questions should be sent to the Ministry of Public Utilities and the Water and Sewerage Authority of Trinidad and Tobago for written submission.
[**Please see Appendix 1**]

6.5 The Chairman thanked the representatives from the Ministry of Public Utilities and the Water and Sewerage Authority, members of the media and the public for their attendance.

ADJOURNMENT

7.1 There being no other business, the Chairman thanked the Members for their attendance and the meeting was adjourned.

7.2 The adjournment was taken at 12:29p.m.

We certify that these Minutes are true and correct.

CHAIRMAN

SECRETARY

February 12, 2020

APPENDIX I

Water and Sewerage Authority of Trinidad and Tobago

Request for Additional Information

General Questions

1. Provide a breakdown of WASA's annual expenditure.
2. State the annual amount of WASA's US dollar expenses in FY 2017, 2018 and 2019.
3. WASA is currently expanding its use of a Risk Management Matrix for strategic development, budget preparation and maintenance management.
    a. Provide a copy of this matrix entail?
    b. What are the top 3 to 5 risks facing WASA and how were these risks identified?
    c. What is the status of WASA's enterprise-wide risk management framework?
    d. Who manages WASA's risk management function?
4. Who is responsible for risk management at WASA?
5. Reference was made to 'Class 4 and 5 to Class 3 Customers'[18].
    a. Provide a list of all classes of customers including an explanation of what the 'Class' mean.
6. WASA is working to increase water coverage by reaching unserved areas[19].
    a. What are the main unserved areas or regions of Trinidad and Tobago?
    b. What percentage of the population lives in unserved areas?
    c. What is the reason for these areas being unserved?
    d. What is the status of WASA's initiatives to rectify the unserved area?
7. Provide a copy of WASA's Strategic Plan for the period 2017 – 2022.
    a. When was this Plan approved and officially implemented?
    b. What measures are in place to monitor the delivery of this Plan?
8. Describe the new technology being used by WASA to detect leaks.
    a. What is the cost of this new technology?
9. Describe the road works collaboration between WASA and the Ministry of Works and Transport.
    a. How are the costs of such initiatives divided between the 2 entities?

Revenue Generation

[18] WASA, Report on the Issues and Recommendations of the Fifteenth (15th) Report of the PAC, page 13.
[19] Ibid.

1. Provide a breakdown of WASA's sources of annual income and expenditure for FY 2017, 2018 and 2019.
2. State the sum of US dollar revenue generated per annum by WASA in FY 2017, 2018 and 2019.
3. Currently a total of 2,960 customers or 0.7% of the Authority's active customer (431,330) database utilize the E-billing facilities offered.
    a. What are the challenges being experienced by the Authority with regard to the lack of utilization of the E-billing facilities offered?
    b. What measures can be implement to increase customer buy-in to online bill payment?
4. Part of WASA's Customer Care and Billing System launched in May 2017 was the use of an auto-dialer to assist in the debt recovery process which includes: telephone calls, SMS (text) messaging and reminder Letters.
    a. What was the value of WASA's Accounts Receivable as at January 31, 2020?
    b. What are the outcomes and value-added of the use of an auto-dialer in the debt recovery efforts?
5. WASA's data reveals that for metered accounts, total bill values were lower overall in fiscal 2018 ($190.76Mn) and fiscal 2019 (£206.13Mn) than in fiscal 2017 ($212.99Mn).

    Water & Sewer Revenue Metered Accounts by Fiscal Year

Class	Fiscal 16/17	Fiscal 17/18	Fiscal 18/19
Residential (A4)	$ 23.71Mn	$ 31.17Mn	$ 23.49Mn
Charitable (A6)	$ 0.15Mn	$ 0.23Mn	$ 0.32Mn
Industrial (B4)	$ 100.44Mn	$ 104.43Mn	$ 115.43Mn
Commercial (C4)	$ 85.05Mn	$ 52.76Mn	$ 63.93Mn
Cottage (D4)	$ 1.97Mn	$ 1.68Mn	$ 1.65Mn
Agricultural (E4)	$ 1.67Mn	$ 0.49Mn	$ 1.31M
TOTAL	**$212.99Mn**	**$190.76Mn**	**$206.13Mn**

    In a media report[20] dated January 23, 2020, the Minister of Public Utilities explained that, as part of a water management plan assisted by the Inter-American Development Bank (IDB), metering will be extended to all customers. Currently, while over 75% of commercial customers are metered, less than 5% of residential customers are. Metered customers are likely to waste less water; they may also decrease their consumption where possible in order to pay less.
    a. What is the reason for approximately 5% of customers currently being metered?
    b. What are the challenges faced by the Authority with regard to metering being extended to all customers?

[20] Trinidad and Tobago Newsday, Le Hunte: IDB arrangement to end TT's water woes, accessed on February 8, 2020: https://newsday.co.tt/2020/01/23/le-hunte-idb-arrangement-to-end-tts-water-woes/

c. What standards and data are used by the Authority to monitor the value-added of metering?
d. What key performance indicators are in place to measure the service provided by the Authority?
e. How does WASA reconcile the positive effect on water resource management and supply of reduced customer water wastage with the possible negative impact on revenue generation of reduced customer water consumption and demand?

6. Out of 5,659 billing queries received in fiscal years 2018 and 2019, 1,252 were not resolved. WASA explained that an exercise is in progress to complete the backlog of queries with the aim of resolving 75% by March 31st 2020 and remaining by September 2020.
   a. What is the status of progress towards meeting the aforementioned by March 31 and September 2020 deadlines?
   b. What percentage of the queries have been resolved as at January 31, 2020?
7. WASA began using an SMS messaging to in May 2017 resulting in the recovery of 5.6Mn worth of debts.
   a. Does this include WhatsApp messaging?
   b. If not, what is the feasibility of incorporating WhatsApp messaging into the SMS initiative?
8. WASA was exploring five (5) non-traditional sources of income. Initiatives were implemented for three (3) of them – namely waste disposal, septage disposal and the marketing of services through Regional Corporations. These initiatives achieved 78% and 92% of their revenue generation targets in FY 2018 and 2019 respectively.
   a. How does the Authority plan to further increase the achievement of revenue targets?
   b. Has the Authority collaborated with the Tobago House of Assembly to market its services through the Parishes in Tobago?
9. What is the status of following two (2) remaining non-traditional revenue generating initiatives, which are being developed in the current FY 2020?
   a. Sale of sludge by-product for retail as topsoil and fertilizers; and
   b. Promotion of reservoirs and dams as tourism and recreational destinations.
10. The Authority planned to implement the provision of chemical and bacteriological tests to soft drink manufacturers' soft drink dispensing machines in FY 2020, with projected revenue of $850,000.00. To this end, WASA's Quality Control Department is pursuing an accreditation scope with the International Organization for Standardization (ISO).
    a. Have all soft drink manufacturers indicated an interested in this proposed service?
    b. Could this service eventually be expanded to other food and beverage manufacturers?
    c. What is the status of the pending ISO accreditation?
    d. What is the precise projected start date of this initiative?

11. The Authority was considering an increase during FY 2020 for application fees for Water Abstraction Licenses and the Establishment of a Licensing Renewal Fee from the current level of $150.00.
    a. What is the expected increased rate?
    b. What factors were taken into consideration to arrive at this revised rate?
    c. When will the revised rate be implemented?
    d. What is the projected revenue gain as a result of this fee increase?
12. What are the additional cost reduction strategies implemented in FY 2019/2020 by the Authority?
13. What is the status of the following cost reduction initiatives? What is the value of the savings realized?
    a. Vehicle Needs Assessment;
    b. Strategic Procurement of Chemicals;
    c. Controls on Telephone Expenditure;
    d. Controlled disbursement of stationery and supplies and sensitisation on importance of cost reduction in all areas;
    e. Limiting publication of advertising; and
    f. Using diesel and super gas only.
14. When was the Overtime Management Committee established?
15. Has an overtime reduction target been set for a specific time frame?
    a. If yes, what is the target and the time frame?
    b. If no, how is progress in this area going to be monitored and encouraged?
16. The Authority has reduced its use of print media.
    a. Has the same been done for broadcast media i.e. radio and television?
    b. If yes, is the Authority of the view that social media can adequately replace all other forms of media for public outreach?
    c. What is the savings realized from the reduced usage of the print media?
17. What strategies are in place to strengthen WASA's engagement and audience base on social media platforms?
18. The Authority runs the WASA mobile app[21]. The app has been downloaded over ten thousand (10,000) times and has a rating of 2.8 stars out of 5 based on seventy-six (76) reviews. The major complaint is registration / sign in difficulties, though some users did not have this problem.
    a. What was the cost of developing the WASA app?
    b. Has the cost of the app been offset in any way by the benefits it has brought?
    c. What steps has the Authority taken to remedy issues with the app?

[21] Google Play, WASA, accessed on February 8, 2020: https://play.google.com/store/apps/details?id=com.utility.app&hl=en

INITIATIVES TAKEN TO IMPROVE DEBT COLLECTION

1. In July 2019, the Authority began a disconnection drive targeting metered customers and customers with curb valve who do not respond to reminders.
    a. How many customers have been disconnected since July 2019?
    b. What is the threshold to determine that a customer will be disconnected?
    c. Of those that were disconnected, how many settled outstanding sums and were reconnected?
2. Curb valves were due to be installed by January 2020 to effect disconnection of customers with arrears over $1,500.
    a. How many of these valves have been installed?
    b. Are further installations planned?
    c. If so, how many and what is the cost of the valves?
3. How much of the Authority's receivables have been written off as bad debts?
4. The Revised Bad Debts Write-Off Policy was due to be implemented in February 2020 following Board approval.
    a. Was the relevant approval received?
    b. Has the Bad Debts Write-Off Policy been officially implemented?
    c. If not, what has delayed the implementation?
5. The Authority has been engaging with Ministries, Departments and Agencies as well as State Enterprises with a view to reducing public sector receivables.
    a. What percentage of WASA's overall receivables is attributable to the public sector?
    b. What has been the trend in WASA's public sector receivables over the past 5 years?
    c. How successful have the Authority's outreach initiatives to public sector entities been in reducing those entities' share of WASA's receivables?
6. The Authority was due to engage a debt collector to assist with reduction of receivables from the social segment by February 2020.
    a. What does the 'social segment' entail and what is that segment's share of WASA's overall receivables?
    b. What is the name of the debt collection company retained for this process?
    c. What is the timeline for the debt collection company's work?
7. What is the status of the debt recovery actions related to Sale of Property, which were commenced in July 2019?
    a. The Authority indicated that the timeframe for this debt recovery initiative is long. How long does this take on average? State a timeframe.
8. The Authority cited the need to engage experts and the related costs concerning property sale.

a. What is the average cost of engaging experts for this purpose?
b. Could these costs be significant enough in some cases to make this debt recovery option not viable?
c. How many sales of property have been concluded to recover debts? How does the Authority account for the sale of property?

OVERSTAFFING AT WASA

1. The recruitment freeze at the Authority for positions deemed non critical was estimated to provide savings of $1,191,710.00 in salaries for the period 2015 – 2018.
    a. How much savings have been realized since 2019?
2. The Authority's desired staffing levels is ten (10) employees per one thousand (1,000) water and wastewater connections as opposed to the regional average of eight (8) employees per 1,000 connections. One of the reasons given for this is that WASA engages in a great deal of Labour intensive operations due to the fact that it is not as technologically advanced as its counterparts that function with 8 employees per 1,000 connections.

    The Authority explained that the Collective Agreement with the Public Services Association (PSA) provides for an "increase in the number of plants that are automated through the use of the relevant technology, thus, requiring less staff to operate these Process Plants".
    a. What plans are in place to enhance the use of technology in order to reduce the prevalence of labour intensive processes and, thus, the required staff level?
3. The Authority is currently engaged in discussions with the Unions towards a new Collective Agreement for the period 2014-2016. The implementation of policies such as the new shift system depends on these discussions.
    a. What is the estimated timeline for the completion of these discussions?
4. The Authority explained that there may be significant costs attached to employees accessing early retirement.
    a. Provide an estimation of these costs?
5. WASA's overtime bill increased by 10% from FY 2017 to FY 2018.
    a. How did the overtime bill for FY 2019 compare to FY 2017 and FY 2018?
6. The increased overtime bill was partly due to the volume of work needed for the road restoration drive.
    a. When is the road restoration drive scheduled to be completed?
    b. Once this is completed, by how much will the Authority's overtime bill be reduced?

7. Due to the reluctance of private contractors to whom payments are owed to work outside of the normal working hours, the Authority has had to acquire additional backhoes for use by its staff on overtime assignments.
    a. What is the cost of the two (2) backhoes procured and of the one (1) that is being procured?

FIELD WORK IN HIGH RISK AREAS

1. WASA indicated that requesting assistance from the Defence Force for its field work in high risk areas. Have WASA personnel ever been accompanied by Defence Force officers?
    a. If yes, what was the cost, if any, of this collaboration?
2. How many times have training exercises for WASA's security team been facilitated through the TTPS?
3. Is there a Memorandum of Understanding or other official agreement between WASA and the TTPS for provision of training?

LENGTHY SUSPENSIONS WITH PAY

1. There are six (6) WASA employees on suspension. Of these, four (4) are on half pay and two (2) are on full pay. Those on half pay have been on suspension for an average of 3 years, while those on full pay have been on suspension for an average of 3 years and 9 months.
    a. What is the value of the total pay received by these 6 officers during their respective suspensions so far?
2. An effective risk management policy takes account of the behaviors, beliefs and values needed to underpin the actions required by the risk processes.
   Some of the key factors contributing to fraud investigations at WASA taking beyond thirty (30) days are:
    - Unwillingness of employees to be investigators in fraud investigations; and
    - Unwillingness of employees to appear as witnesses.

    a. What measures can the Authority implement to sensitize employees to the importance of curbing fraud?
    b. Is there a code of ethics that WASA employees are required to follow?
    c. Has a study been conducted to assess the prevailing attitudes amongst personnel concerning corruption and measures to tackle the problem?

Ministry of Public Utilities

Request for Additional Information

1. What is the status of the Draft Business Plan submitted to the MPU’s for comments?

VERBATIM NOTES OF THE FORTIETH MEETING OF THE PUBLIC ACCOUNTS COMMITTEE HELD (IN PUBLIC) IN GROUND FLOOR COMMITTEE ROOM (WEST), CABILDO PARLIAMENTARY COMPLEX, OFFICE OF THE PARLIAMENT, ST. VINCENT STREET, PORT OF SPAIN, ON WEDNESDAY, FEBRUARY 12, 2020, AT 10.44 A.M.

PRESENT

Dr. Bhoendradatt Tewarie	Chairman
Mr. Taharqa Obika	Vice-Chairman
Dr. Lester Henry	Member
Ms. Charrise Seepersad	Member
Mr. Randall Mitchell	Member
Mr. Adrian Leonce	Member
Mrs. Paula Gopee-Scoon	Member
Ms. Hema Bhagaloo	Asst. Secretary
Ms. Vanna Jankiepersad	Procedural Officer Intern
Mr. Justin Jarrette	Parliamentary Intern

ABSENT

Mrs. Ayanna Webster-Roy	Member

WATER AND SEWERAGE AUTHORITY OF TRINIDAD AND TOBAGO

Mr. Romney Thomas	Chairman
Mr. Alan Poon King	Chief Executive Officer
Mr. Dion Abdool	General Counsel and Corporate Secretary
Mr. Sherland Sheppard	Director of Operations
Ms. Rachelle Wilkie	Director of Finance
Mr. Rajinara Gosine	Head, Water Resources Agency
Ms. Denise Lee Sing-Pereira	Director, Programmes and Change Management
Mr. Aldwin Browne	Director of Corporate Services

Mr. Ronnie Spencer	Head, Workforce Planning and Organizational Development
Ms. Sherry Dumas-Harewood	Director, Customer Care
Ms. Arlene Johnson-Lawrence	Head, Procurement
Mr. Robert Subryan	Head, Internal Audit and Compliance

MINISTRY OF PUBLIC UTILITIES

Ms. Beverly Khan	Deputy Permanent Secretary
Ms. Sara Jade Govia	Water Sector Specialist
Ms. Janette St. Hilaire	Financial Analyst
Ms. Arlene Collis	Senior Economist

Mr. Chairman: Good morning, everybody. I want to welcome each and every one who is present here this morning and I want to thank you very much for coming before this Public Accounts Committee of the Parliament. This morning, we are going to do a follow-up discussion on the implementation of the recommendations of the Fifteenth Report of the Public Accounts Committee on the examination of the audited financial statements of the Water and Sewerage Authority of Trinidad and Tobago for the years 2008 to 2013. We examined those accounts a little while ago and we made some recommendations. That report was laid in Parliament together with the recommendations and what we are trying do with some of the agencies is to follow up and to see whether in fact the work of the PAC has any impact on the conduct of business in these institutions that we examined and secondly, whether we can anticipate or expect improvements and progress from these institutions which are really funded by the taxpayers of Trinidad and Tobago.

My name is Bhoendradatt Tewarie, I am the Member for Caroni Central and I am here as Chair of the PAC. The purpose of this meeting of the Public Accounts Committee is to follow up on the implementation of the recommendations in the Fifteenth Report of the Public Accounts Committee on the examination of the audited financial statements of the Water and Sewerage Authority of Trinidad and Tobago for years 2008 to 2013.

Based on the issues identified, the following key stakeholders have been invited and we are glad to see you here: The Ministry of Public Utilities and the Water and Sewerage Authority of Trinidad and Tobago and we have here the chairman of the board as well as the chief executive officer and other members of the administration of WASA and we also have the Acting Permanent Secretary in the Ministry of Public Utilities and some of her staff from the Ministry.

This meeting is being held in public and it is being broadcast live on the Parliament Channel 11 and on the Radio 105.5 FM and the Parliament’s YouTube channel, *ParlView*. Viewers and listeners can send their comments related to today's topic via email parl101@ttparliament.org, facebook.com/ttparliament on Facebook, and Twitter, @ttparliament on Twitter.

What I will do now is I will ask my colleagues to introduce themselves and I will then ask each member who is here present to introduce themselves so the public is aware of who is speaking when they speak. So I already introduced myself as Chair and I will start on my right who is the Vice-Chairman.

[*Introductions made*]

Mr. Chairman: Okay, and members of the representatives of the Ministry of Public Utilities and I will start with the Deputy Permanent Secretary and you can introduce your staff.

[*Introductions made*]

Mr. Chairman: Okay, so we will go with that then. The members of the WASA team led by the Chairman.

[*Introductions made*]

Mr. Chairman: That is it? Okay, thank you all very, very much. Welcome again, we are glad to have you here. We will ask you a number of questions but before we do, we would like to have an initial statement first by the chairman, if you would do that, and then we will ask the Acting Permanent Secretary also to make a statement on behalf of the Ministry.

Mr. Thomas: Thank you, Chairman. Good morning, Chairman and members of the Public Accounts Committee. Thank you for the opportunity to provide an account of what has been taking place at the Water and Sewerage Authority. Let me begin by stating that it is a well-established fact that there are several pre-existing issues impacting the operations of the Authority and its service delivery for many years. Many of these service delivery challenges, to a large extent, are related to infrastructural issues that have plagued the Authority for decades.

As we are all well aware, WASA is mandated to provide potable water and sewerage collection and treatment services to the population of Trinidad and Tobago. However, to provide water services to our citizens, the Authority must undertake key activities such as the development of surface, ground and the desalinated water sources; construction and rehabilitation of water infrastructure, namely water treatment plants, booster pumping stations, reservoirs and wells; development of pipeline network inclusive of the installation, extension and replacement of transmission and distribution pipelines, operation and maintenance of water treatment facilities required for the production of water for domestic, commercial and industrial use.

On the other side of its service delivery mandate, that is, providing waste water services, the Authority is required to engage in activities such as the construction and rehabilitation of water infrastructure, namely waste water treatment plants and its stations; installation, extension, replacement and maintenance of sewer lines; operation and maintenance of waste water systems to collect and treat waste water and discharge effluent into the receiving water courses that conforms to regulatory standards; adoption of existing facilities and integration of systems to expand centralized sewerage coverage.

The Authority's success in achieving the above stated mandate is inextricably linked to its ability to consistently and effectively carry out illicit activities over the years. This can be challenging with the ever-increasing demand coupled with factors affecting water availability such as harsh weather conditions as was the case in 2019. The Authority's ability to carry out required infrastructural development works is affected by the high cost to undertake such activities.

In recognition of this fact and in spite of the financial constraints gripping our economy over the last four years, we have sought to address these shortcomings even with the limited funding available. In this regard, over $2 billion in financial resources have been committed to enhancing WASA's infrastructure over the last four years. As a direct result of this investment, the Authority has been able to complete a number of major projects in the areas of water delivery and improvement to the sewerage system which have improved the level of service and standard of living of citizens in several areas throughout Trinidad and Tobago. Some of these infrastructural development works included the construction of new service reservoirs at Four Roads, Tucker Valley, Hololo and Charlotteville while works are ongoing to complete others at Quarry in Valencia, Guanapo and Lillian Heights. The overall additional storage capacity that would be gained is 2.7 million imperial gallons at a cost of approximately $27 million.

The aged pipeline infrastructure and the need for new pipelines is just one of the major issues negatively impacting the Authority's delivery of service to its customers. Persist in addressing this matter, the Authority has laid over 19.2 kilometers of new pipelines. In Trinidad, this includes pipeline installation from St. Mary's Junction, South Oropouche to the LABIDCO Estate as well as in Talparo, Vistabella, Santa Flora, Fyzabad, Champs Fleur and Diego Martin. In Tobago, there were pipeline projects in areas such as Buccoo, Glen Road, Patience Hill, Delpeche Road and Allfields Trace.

In parallel to these pipe-laying projects, WASA has also placed great emphasis on its leak repair programme in order to reduce the level of its unaccounted for water while improving the supply to customers. Over the last four years, approximately 79,000 leaks have been repaired and currently the backlog has been reduced to just over 900 leaks.

In addition to our pipeline infrastructure, WASA also constructed new booster pumping stations at various locations such as Savonetta and McKai Lands. Development of new ground water sources and rehabilitation of existing wells are also key components of WASA's drive to meet the growing demand for improved water service. In this regard, the Authority has completed and operationalized the new Arnos Vale well in Tobago, while three rehabilitated wells have been completed and placed on stream at Siparia and Carlsen Field. These wells combined are providing over one million gallons per day to the Authority's overall daily production. In relation to developing new water treatment facilities, the Authority has completed the construction of a new raw water intake and treatment plant at Charlotteville, Tobago where over 500 customers at Campbellton, Charlotteville and environs are enjoying an improved water service.

Another key area of WASA's operations that requires equal attention regarding infrastructural development is the area of waste water collection and treatment since this can have a major impact on public health and the environment. To this end, the new Malabar waste water treatment plant and collection system has been completed with funding secured through the Inter-American Development Bank. Approximately 30,000 residents are benefiting from the construction of this facility and this is expected to increase to over 108,000 upon completion of expansion works on the collection system to service the full Malabar catchment.

In Tobago, there has also been a significant improvement in waste water services for the construction of two new sewer systems at Bon Accord and Samaan Grove. This project resulted in over 400 new waste water customers and the improvement in waste water coverage to customers in coastal areas of Crown Point, Pigeon Point, Plymouth, Black Rock, Golden Grove and Buccoo. This project has already had a positive impact on the coastal waters of south-west Tobago where there has been a marked improvement in the coastal water quality.

The current economic environment certainly creates a challenge in pursuing some of the large scale infrastructure projects required to deliver further improvements in the Authority's delivery of service. However, the achievements outlined above underscores that the Authority had been working to do more with less. With continued prudent management of the available resources, I am confident that we will continue to see further improvements in the Authority's performance and overall service delivery to the people of Trinidad and Tobago. Thank you very much.

Mr. Chairman: Thank you very much for your presentation. Useful to listen to it and try to digest some of the issues there so we will come to you on some of the issues. Ms. Khan, Acting Permanent Secretary.

Ms. Khan: Thank you, Mr. Chairman, for the opportunity to give this brief statement on the behalf of the Ministry of Public Utilities which has responsibility for setting policy and high-level strategy as well as for ensuring the prudent use of public funds as it relates to the Water and Sewerage Authority. We are driven by the goal of providing a 24/7 water supply to all citizens and improving the coverage of quality sewerage services.

Since the last meeting of the Committee on WASA, the Ministry of Public Utilities has been unrelenting in its approach to devising a strategy that would sustainably and comprehensively solve this country's water sector challenges. The reality is that water is the nucleus of our nation's socio-economic development, the foundation of our citizens' well-being and at the heart of our natural environment. Working hand-in-hand with WASA through the support of our development partners, the Ministry now has a fairly good understanding of the problems and has devised a no-regret strategic approach to cost-effectively addressing these problems.

Our strategy focuses on two main pillars. Infrastructural changes that address all the moving parts contributing to non-revenue water or water losses, including metering and asset renewal, plus climate change investments as key components of the infrastructure solution. Secondly, institutional strengthening to enhance the systems, technology and know-how of WASA towards a performance-based approach to management that will ultimately sustain the results of these infrastructure investments.

The Ministry of Public Utilities continues to support WASA through the Public Sector Investment Programme and the annual Government subvention. The Ministry has judiciously strengthened its oversight to ensure that the country is receiving the corresponding development benefits of these investments in WASA. We have piloted the application of data analytics to monitor WASA's performance against mutually-agreed indicators. Leveraging technology to harness data to drive decision-making has resulted in:

- A greater focus on WASA's pressure points and opportunities for improvement based on benchmarking WASA's performance against its utilities peers.
- Robust monitoring of public sector funding.
- Accuracy in the reporting on WASA's operations, that is to say in terms of leak repair, reservoir levels and other statistics; and
- rigidity in screening and implementing projects delivered by WASA that would have a greater development impact.

The challenges facing WASA are varied but they are all interrelated. The experience of other countries in our region, in particular Jamaica and Bahamas, have demonstrated that feasible solutions do exist. I thank you.

Mr. Chairman: Thank you very much, and again, I appreciated the overview and we will get to you with some questions.

I want to start by addressing the issue that is perhaps the biggest concern of citizens in the country in relation to WASA and some of those issues are addressed in the preparation of the reports that you have sent to us. So it is not that we are not aware of some of your answers but it is important for the public to know and therefore some of the questions are meant to illicit responses that would then provide shared information to the public at large.

The public knows—citizens know—that during the dry season there is a problem. They are also aware that during the wet season or heavy rainfall or stormy periods, we sometimes have excessive water that results in floods and the citizens find it difficult to understand why we should have restrictions of water during times of the year when it seems that there is adequate rainfall. Now, that kind of thinking may be misguided but I wonder if you can explain to us, what are your major sources of water and for what purpose, and secondly, the quantity of storage capacity that you have and what is the daily demand for water that you must satisfy and how you manage these three things.

Mr. Thomas: Let me take the last question first. In terms of the daily demand for water supply, we produce approximately 200 and—right now, producing approximately 215 million gallons a day. The average daily consumption is approximately—there is a shortfall. We are approximately at 240 million gallons a day. That is where we are at. So that is why we are getting into a lot of scheduling and so forth.

Mr. Chairman: So you produced 240?

Mr. Thomas: 215 approximately right now.

Mr. Chairman: 215, and the demand is?

Mr. Thomas: Approximately 240 million gallons a day, 2-4-0.

Mr. Chairman: So the demand is 240 and the production is 214?

Mr. Thomas: That is correct.

Mr. Chairman: All right, okay.

Mr. Thomas: The majority of our water supply comes from the surface wells—well the surface reservoirs. That is about 60 per cent of our supply. The balance comes from a mixture of ground water which is the well water as well as the desalinated water. They both approximately contribute about 20 per cent each from those various sources. And as you know, desalinated water, which is fairly consistent in terms of the supply of desalinated water, but it is prohibitively expensive.

Mr. Chairman: Okay. You have this additional problem though if you are producing 214 million gallons of water per day and that cannot satisfy the demand which is about 240 million gallons, you have this additional problem of leakages in the system, okay. How much of your 214 million gallons escape through the leaks on a daily basis?

Mr. Thomas: We do not have any precise figures, we have done some work in terms of trying to accurately diagnose how much water is lost through leakages and so forth, but best estimates, it is approximately 40 to 45 per cent I would say in terms of leakage of water. That is both on the supply side as well as on the customer's side as well because we sometimes forget that leakage on that side of the equation is also a factor. So when I say customer side, you have leaking tanks, something that is under your control, in your own yard.

Mr. Chairman: Yeah. Well I mean, what I am concerned about is the leakages in the pipes under your control. But if you tell me that you lose about 40 to 45 per cent, are you telling me 40 to 45 per cent of 214 million gallons?

Mr. Thomas: That would be the amount that is lost, but again, we do not have an accurate figure because remember we are not able to measure exactly what is lost on the customer's side as opposed to the—

Mr. Chairman: Well let us be conservative and say 13 million. Okay? But what that would do though is that it would make the actual water that you have available for a demand of 240 million, it would make it something like 180 million gallons so that the real shortfall based on the leakage is much more substantial than a cursory examination of the numbers would reveal. Is that true?

Mr. Thomas: That is a fair assessment.

Mr. Chairman: Okay.

Mr. Thomas: But bear in mind that that is why we talk about scheduling a lot in terms of what the Authority—

Mr. Chairman: Yeah, I understand the consequences but I just wanted to understand that basic fact because I mean that is what we are starting with, which is that people need water for a whole range of uses, we need to know how much they need, we need to know what are the sources of supply to supply which demand and then you have this additional problem of the leakages now and I remember in the last session that we had, that was a major issue and I think you did some reports here which I looked at so you also are addressing that as an issue. I heard you say that you repaired 79,000 leaks. Is that correct?

Mr. Thomas: Yes, Chairman.

Mr. Chairman: In the system and you said a number that remained but I did not get it. You remember what it was?

Mr. Thomas: The current leak level is about—over 900 leaks currently.

Mr. Chairman: 900?

Mr. Thomas: 9-0-0, yes.

Mr. Chairman: So that means—so you have fixed 79,000 leaks and you only have 900 more?

Mr. Thomas: Well, remember a leak is not a static thing.

Mr. Chairman: Yeah, it will happen from time to time.

Mr. Thomas: It will happen over time so it is over the period of four years. I was giving you a figure over four years so those leakages repaired, some breakages again, we go back, repair, so it is a constant thing. So cumulatively, we have repaired over 79,000 leaks.

Mr. Chairman: All right. I read something from your documents and I just want to pick out a couple of things that are connected. One is that first of all that you know by and large where the leaks are because you have provided information on that. Is that true?

Mr. Thomas: Yes, for the most part but remember, a lot of the leaks that we talk about are leaks that we are actually able to see, leaks that are reported.

Mr. Chairman: Okay.

Mr. Thomas: This is why there was a lot of emphasis being placed in our submission about the DMAs, the district metered areas, where we kinda try to split it up into little, smaller zones, so that those zones, you are actually able to pick up leaks by reduction in pressure and so forth, so you would be able to pick it up a little more rapidly rather than always having to rely on somebody having to report a leak or you, you know, picking up a leak visually.

Mr. Chairman: You see, I am trying to understand this thing properly and I think the population probably needs to understand it too. You have a GIS system which you say allows to you to know where almost all the pipes are but not all. Are there pipes that you cannot pick up that you are not sure where they are and why is that? That is first of all.

Mr. Thomas: Remember, most of the pipes are underground so you would not always immediately pick up where there is a leak because some of those leaks—

Mr. Chairman: No, no, no, let us just deal with the pipes first, forget the leaks. Why are we not picking up some pipes with your GIS system? How come some are lost in the system?

Mr. Thomas: I will ask the CEO to explain this further.

Mr. Chairman: Yeah, okay.

Mr. Poon King: The GIS system that was developed incorporated data that WASA had on its pipeline infrastructure at the time of creation. Given that our pipeline network started in the 1850s—

Mr. Chairman: Has expanded, yes.

Mr. Poon King: —there would be pipes that are in the ground that we do not have records for and those that we do have records for have been put on the system. So they have been put on the GIS system so we could access it electronically.

Mr. Chairman: Okay. Is there any way of detecting where the missing pipes might be or is that something you have to stumble on and discover?

Mr. Poon King: No, you can and we have been going where for example, if we know there is a pipeline along a route.

Mr. Chairman: Because chances are the missing pipes are older rather than newer pipes. Not so?

Mr. Poon King: Correct.

Mr. Chairman: Okay, because that has an implication for how old they are, how aged they are and what is the likelihood that you might have leaks in them. That is why I am asking the question.

Mr. Poon King: But we can detect them. Certainly given that they are underground, the first thing you will want to do is try to see how you can do it as quickly as possible so you look for what surface features you have with a pipeline. First thing that you normally go for would be valves, so the valves would be along the pipeline generally so you would get an indication and then you can go in-between the valves and use devices to determine the location of the pipes as you go along.

Mr. Chairman: All right. Now I picked up from the reading here too that is there is another thing which is that you got a new instrument last year. Is that correct? That allows you to deal with some these leaks with a better more effective use of technology without digging up the place and so.

Mr. Poon King: Right, so that is a ground penetrating radar and it is one of the tools that we would use. There are other tools that we have available.

Mr. Chairman: So this has only become available from last year?

Mr. Poon King: Correct.

Mr. Chairman: Right. And it is now in use?

Mr. Poon King: Correct.

Mr. Chairman: Okay.

Mr. Poon King: So that I would say is one of the tools that we would utilize and that gives you what is going on below the ground in terms of what features that they are in terms of pipe, concrete, cables, that type of thing and it complements the other devices that we insofar as detecting leaks and so on. So it is one part of the armoury so to speak.

Mr. Chairman: Okay, but in another part of the report, it says that you cannot use this instrument for every leak problem that you have and sometimes you have to basically go and dig. Is that correct?

11.15 a.m.

Mr. Poon King: Well, as I indicated, the ground penetrating radar is one device.

Mr. Chairman: Yes.

Mr. Poon King: We have other devices that we utilize, that if we do have to dig— even the ground-penetrating radar is really to give you—

Mr. Chairman: Location.

Mr. Poon King:—information as to what is below the ground. And there are other devices that we would utilize to determine, to pinpoint, where exactly the leak is. In some cases, you have water coming to the surface at one point, but in fact, the leak is some distance away. And we have devices to assist us with determining where the actual leak is, to minimize the dig area, the dig zone.

Mr. Chairman: Okay. Now, the Minister has spoken about publicly, and I think in the report here there is also a response to one of our questions in which he talked about the fact that an IBD loan will address some of the issues related to WASA. Is any part of that loan related to the replacement of the pipe system? Permanent Secretary, would you be able to answer that?

Ms. Khan: Yes, indeed. In the discussions that we have been having with the IDB, the key component of the programme is dealing with non-revenue water, addressing the issue of leaks, but also asset renewal, replacing high-leakage pipelines and rehabilitation where it is necessary.

Mr. Chairman: Okay, so besides the business of detecting then, there is a plan for replacement and renewal of assets.

Ms. Khan: Yes.

Mr. Chairman: Okay. I will ask one final question before I give my colleagues an opportunity to ask some questions. I noticed too in one part of the report, that there is a 10-year timeline for the resolution of some of these issues, along with financials over the period. Is that—I am not sure if I should pose this question to the Permanent Secretary—before the discussion with the IDB on replacement, or does that take into account the discussion that is taking place?

Ms. Khan: It takes into account the discussions that are taking place with the IDB.

Mr. Chairman: So, even with that, it is going to take 10 years to resolve these issues?

Ms. Khan: But there will be significant progress achieved along the way. It will take us that long towards the goal of 24/7 for at least 90 per cent—

Mr. Chairman: Water.

Ms. Khan: —of the population. Yes.

Mr. Chairman: Okay. Well, thank you very much for the answers and I will ask my colleagues. Yes, Deputy Chairman.

Mr. Obika: Thanks Chairman. Good day, the first question has to do with the absence of audited financial statements. And if we can get an indication as to—because we saw that in the report there was a lot of statements about progress regarding the management, accounting and internal reporting on a monthly basis going from 30 days after the month ends, to seven to 10 days after the month ends you are getting internal management reports. Why then do we not have accounts? And then in the response, to give an indication as to the general revenue per annum of WASA, versus the general expenditure and the shortfall on a cash basis, not necessarily on an accrual basis.

Mr. Thomas: When in—we were appointed in 2015—December 2015. We met— the last financial statements that were audited was 2011. So we were responsible then for bringing those financial statements up to date. So there was already a backlog when entered office. Since that time, we have completed audited financial statements for the years 2012, 2013, 2014 and 2015. Auditing is a—I am not an auditor but from all reports, it is a very time-consuming business. So—and there have been various challenges over the time. So, currently we have finished 2015 and 2016, we have already started 2016. We have been in discussions with the auditors to try and see if we could expedite this by perhaps—it is an option that they have thrown out at us to try and do a few years concurrently to see if we could try and bring it up to date. We are still on schedule to try and complete another two years' audited financial statements this year, 2016, by June, and later in the year 2017. And if that plan actually comes to fruit, we will be able to bring it up to date early 2021.

The other part of your question was the approximate revenue.

Mr. Obika: Revenue expenses and the shortfall on a cash basis.

Mr. Thomas: Just looking at our recurrent expenditure, our revenue is approximately $700 million a year, primarily coming from rate payers, and overall, expenditure is approximately $2.5 billion every year. So we are left with a shortfall of about, how much is that, 1.7/1.8 in that vicinity, which is made up largely by—we do get a large subvention from the State, which helps with that shortfall.

Mr. Obika: Then what would be—because I am seeing here receivables at 600 million. The only issue that some of had was that there was no indication as to the ageing of it. So which receivables were less than 30 days, which were less than 90 days? So that is one aspect of the question.

The other thing is, what is the composition then, in terms of percentages? If you can give us probably the top four cost items. I am seeing that the overtime payments to staff ranges from $70 million to $80 million, all right, depending on which year you look at. So even in the best year, it is about 70 million. What is the total staffing bill in that regard?

Mr. Thomas: I would turn this question over to the Director of Finance. But approximately, in terms of the staffing bill every month, we are looking at approximately $90 million to $100 million every month, in terms of the wage bill.

In terms of the big ticket items, in terms of expenditure, well wages, obviously, heavy equipment, chemicals, security cost, those are some of the more weighty items. But I invite the Director of Finance to answer the question further.

Ms. Wilkie: The top four items?

Mr. Obika: In terms of percentages of expenditure. So we know that salaries are about 35 per cent or 40 per cent roughly. So apart from salaries—so, not the dollar-value, just percentages, in terms of expenditure. So we could have an indication as to what exactly WASA spends its moneys on.

Ms. Wilkie: Well, salaries would be 35 per cent. Desal purchases as well—purchases of desalinated water, chemicals, security, and heavy equipment.

Mr. Obika: Then this leads to my last question, which was really going to be my first question. It has to do with US $39 million earnings from sale of water to companies in the industrial estates. All right? How has—given that desal water is a significant part of it, and we have two main desal plants, well locations—the closure of some operations in Point Lisas been affected? Or has it affected revenue streams, in terms of industrial?

Mr. Thomas: It definitely has, in terms of—one in particular, I remember Mittal, the closure of Mittal steel, that severely impacted our fortunes, as they say, approximately I would think somewhere in the vicinity of $4 million a month from Mittal steel alone. You had other closures over time that have also affected us. Mittal, in particular, was one major closure that affected us. I think one or two of the other plants, ammonia plants that are closed down, they have also affected our revenue stream.

Mr. Leonce: Thank you, Chair. I have listened to you talk about the challenges you have. You spoke about the leaks. You spoke about limited funding. You also spoke about the severe weather and I know the high usage. You would have reacted to how you are dealing with the leaks and the repairs and finding some of the pipelines. I would like to know how—what strategies, if any, you have in place for the severe changes in the weather, and the high usage of the population, in terms of water.

Mr. Thomas: I will ask the Director of Operations to elaborate on this further. But one of the main things that we have to sensitize the population to is the idea of water conservation. Education is key. We need to let people know that this is a precious resource. It is a dwindling resource. All over the world, countries are faced with dilemmas, in terms of water supply. Some countries actually run out of water; some major Metropolitan cities. So we have had to embark on an educational campaign, especially at the level of school children, and primary school children, and let them be a little bit more circumspect in their water usage. A lot of children go back and they actually educate their parents and let them know: "Look, you need to be a little more circumspect in how you are using the water." But there are other strategies and probably the Director of Operations could elaborate some more on this.

Mr. Sheppard: Hi, good morning. Last year was our most severe time we went through with the dry season and we have put in place strategies such as the hour schedules, right and supported that by trucking to different areas.

The change in weather, weather is unpredictable. Last year we had several concerns with the filling of our reservoirs. The reservoirs got filled—well, not filled they improved at December, which we had significant rainfall. But we have very many strategies, very many different schedules for different status in the reservoir levels, okay, and we supplement them by water trucking.

Mr. Thomas: I think a lot of people are still under the impression that, because of the rainfall, we have seen an improved rainfall that, you know, the hosepipe band is not on. We still have the hosepipe band. The hosepipe band is still in effect and we are going to actually be, trying to be a little bit more—we are going to do a little bit more surveillance to ensure that members of the public actually adhere to the hosepipe band.

Mr. Leonce: Okay, I will make sure and "watch meh hose". I wanted to know if there is some form of measurement, in terms of the strategies, with respect to the conservation initiative that you all are embarking on.

Mr. Poon King: Well, the measures, to say that we are measuring, I think the only measure really would be how much contact we have made with our customers on the whole conservation issue. We have been trying to promote conservation as the cornerstone to the overall demand management initiative. That in itself, at every opportunity, we do communicate that conservation on the part of the customer is critical. And our latest campaign that we are launching now is: “Why I conserve” and putting it to the customer that you have a role to play. The Chairman had indicated the whole “unaccounted for water profile” includes, yes, there are leaks on the road, but there is leakage or losses on the customer side as well.

So at this time, it is more encouragement. We do have the enforcement component, again, as the Chairman had indicated, through the hosepipe ban, and we have do have our patrols going out, that when there are breaches that we do take action against people who are breaching the Act.

Mr. Mitchell: Thank you very much, Mr. Chairman. As we spoke about the hosepipe band, could you just explain, what exactly is the hosepipe ban? Is it that it is a band on hoses that are unregulated by a nozzle? And I will tell you why I am asking. Because it is generally felt that a hose that is regulated by a nozzle is much more efficient than if you fill a bucket. Because when you fill a bucket, you fill about five gallons, and if you are washing your car or you are watering plants or whatever, you just dash the whole bucket on, and it is way more inefficient to use a bucket. So what exactly is the hosepipe ban?

Mr. Thomas: It is actually spelt out in the Water and Sewerage Authority Act that tells us that watering gardens or washing cars with the use of a hose is prohibited at certain times, once the Authority deems it fit to do so. Maybe the Act was created at a time when we did not have such niceties as nozzles that, you know, come on and off. Because certainly, the unrestricted use of the water, without a nozzle will certainly also have an impact. I hear what you are saying. It is generally felt that filling up a bucket and washing your car with the bucket is a much more efficient use of the water. But that is essentially it as is spelt out. The Act did not get into such details as to with nozzle or no nozzle. It says one you use a hosepipe for watering your garden, washing your cars, or so forth, that is prohibited. It comes with a fine.

Mr. Mitchell: Yeah. Perhaps, we have to look at that. Okay, I agree with what you are saying, in terms of losses on the customer side, because regularly you drive around and you see a lot of people have leaky tanks, in terms of the float, breaking down, and it leaks. In terms of your surveillance— because I read that you have a number of field officers on the street, on the beat, looking at these matters, are you all penalizing these customers for these types of leakages?

Mr. Thomas: Well, quite frankly, it is pretty hard for us to detect that; what is going on behind a customer’s wall. We may or may not see somebody with a tank leaking. In a case like that, I do not even know if there is a fine for something like that. It is something that—we try to coerce somebody, use moral suasion to tell them: "Look, you need to fix this." It is pretty hard, sometimes in cases where you have a flat rate, you know, for people to basically recognize that: Look, we have to conserve. It really comes from an educational standpoint for people to understand the need for conservation. As I keep on saying, it is dwindling resource, and the more you waste it, is the more you will realize in the times of need, how precious this thing actually is. But it is really hard for us to monitor something like that. Somebody's leaking water tank, toilet tank, we would not know about these things.

Mr. Mitchell: But I mean if it is sewered area, you probably would not know if a toilet is leaking. But if a tank is leaking, I mean the water must run somewhere, and you would see evidence of it. So I mean, perhaps, it is something that we can look at, to place a sanction upon, in times of shortage, whenever you declare those times.

Mr. Thomas: And we do believe that regulatory changes, legislative changes, actually, in terms of increased fines will actually go some way towards, you know, helping the conservation drive.

Mr. Mitchell: All right, let us talk efficiency in expenditure. You had identified a number of initiatives, and I was hoping that this figure of two point—well, you quoted 2.5 billion. I thought that it could have been reduced somewhat. How have those initiatives been going, in terms of reducing the expenditure, making the expenditure a little more frugal and lean?

Mr. Thomas: We have put in place a lot of measures to try and reduce expenditure, as you know. For instance, one of the things that we are actually doing, you know, we have a lot of employees as you know, and those employees are being put into useful areas, you know, where we would normally perhaps, in years gone by, use contractors to perform those services. Pipeline maintenance, ground maintenance, for instance, that has saved us. I think the ground maintenance figure that I had, that I was told, was about $30 million a year. We have been able to save that cost.

The flip side of that, we have had a little increase in the overtime rate. But certainly nowhere near what we used to spend in those areas. So some of those measures actually have borne fruit. Like for instance, we have reduced the amount of properties that we have actually been leasing, tried to combine properties. These are some initiatives that have actually saved us approximately $2 million for the year. Vehicle, rentals of vehicles. We have reduced a considerable amount of vehicles that was previously rented. I would not want to go into what they were being rented for. I do not know. But there was a considerable amount of vehicles that were rented that we have been able to save a lot of money from reducing that.

Cell phone use, the amount of cell phones, everybody seems to want to have a cell phone. We have cut down a lot of that. A lot of the expenditure has actually been reduced. But, you know, with the ageing infrastructure as well, the repairs, there is a lot of equipment repairs, pump repairs. You know, the lines, we have cost that we have to face. So even though you have saved in some areas, there are some areas that, you know–

Mr. Mitchell: I mean, well obviously we would want to see the money being spent on your core operations rather than on cell phones and these ancillary matters.

Mr. Thomas: Absolutely.

Mr. Mitchell: Let me just talk about debt collection. I see that you all are becoming very, very serious with your debt collection. I am seeing that there is some talk about sale of property to recover your debts. How has that been going? Is it still $600 million, your age receivables figure, or has that been reduced? How have those initiatives been going with respect to reducing your receivables?

Mr. Thomas: We need a consistent drive towards reducing receivables. Because the receivables have actually gone up. Okay. The amount of receivables have actually gone up, which is why we have to get a little bit more firm in our approach to collection of outstanding receivables.

We have, in the past, threatened to sell properties. A lot of the times when we have actually made those threats, people have come forward and entered into arrangements to try and repay the money, or paid off what is outstanding. We have also recently, a part of the debt, we have engaged a debt collector to try and see how best we could try and recover some of the outstanding moneys in that regard. So those are some of the things that we are actually trying to do.

But, in terms of the—it is very hard to actually go to central government and ask for money to finance our recurrent expenditure, especially having such a large receivable outside. So it is our responsibility to take firm steps to actually try and recover what is outstanding and what is outside there.

Mr. Mitchell: Is the age receivable amount, is that connected to your difficulty, well, where residential customers are concerned in just locking off the water?

Mr. Thomas: The majority of our debt profile is— our receivable profile, I should say, is from residential customers. Maybe the Director of Finance could give us a better understanding or breakdown of what that comprises.

Mr. Mitchell: I am just asking, because we want to make recommendations, obviously, but you know in T&TEC, they just come and they lock you off, right?

Mr. Thomas: Well, you see our large problem is that we are not largely metered. There is no universal metering. In other countries you could basically—sometimes, if you have ultrasonic meters you could sit down in your office and basically turn off somebody. For us now to go and disconnect somebody, we actually have to send out a crew, "dig up de road" to turn it off. There is a cost for that. It is not the most efficient way, because there is a lot of digging involved and crews that have to go out and get this done. So, it is largely because of how our system is configured as well.

Madam Chairman: Thank you. Sen. Seepersad.

Ms. Seepersad: Thank you, Chairman. I want to ask you about metering accounts. Because to me, that is one way of one, people paying for what they use. And when you pay for what you use, you know, you tend to be more cognizant of how you use something, and that will address two things. It will address the quantity of water you use, as well as your ability to cut people off if they do not pay. Could you tell me what is your strategy for metering? I know you meter commercial people, the commercial enterprises, and there are some residents that are metered, but it is not very much. Could you tell me about that, please? What is going on?

Mr. Thomas: That is one of our primary areas of focus. It is going to be an expensive proposition. By all accounts, to meter nationwide, mostly the residential customers, it is going to cost us in the vicinity of about $1 billion. That is the last figure I was told. But you are quite right, that cost might in fact be a cost that might be well worth incurring because one, you deal with demand management immediately. People, as you rightly said, you are paying for it, you are more judicious in how you use it. Just like with T&TEC, you come out of a room, you take off your lights because you know it is going to translate into your meter. It is the same thing. And as well, we would not, in terms of conservation, you know, how people use the water and all these sorts of things, enforcement, how we are able to take off the water if we need to. There are ways. Probably it balances off, you know. So it is something that we are actually looking at very closely.

Ms. Seepersad: Do you have a plan as to what is the rollout time?

Mr. Thomas: Sorry, I missed that question.

Ms. Seepersad: Sorry, what is the rollout time for the plan?

Mr. Thomas: It is part of the discussion we are having with IDB right now. That is part. So if that comes to fruit, it is going to take—we are going to have to do it in a phased manner. So it is not going to be something that is going to be done. We are not going to say we are going to do it in one year. It will probably be something that you might have to do over a period of time and roll it out, with assistance from the IDB as well.

Ms. Seepersad: So you do not really have a definitive time frame right now?

Mr. Thomas: What I am being told by the CEO it is probably about approximately five years for that plan to be implemented.

Ms. Seepersad: And the 1million cost that you talked—

Mr. Thomas: One billion.

Ms. Seepersad: Oh**,** one billion, okay.

Mr. Thomas: We are talking billions.

Ms. Seepersad: Okay. But part of the cost you charge either the resident or the commercial occupier, the cost of installing the meter, do you not? So is there some kind of cost recovery built in?

Mr. Thomas: That is something that we would definitely take a look at. The meters that we are looking at is a little bit more efficient and a little bit more costly than the traditional meters that you are probably accustomed to, the mechanical meters. They are not as accurate as some of the more modern meters, which are the ultrasonic meters that we are looking at.

Ms. Seepersad: The other thing I was interested in is e-billing. Because that is another way of being able to be in contact with your customer base very quickly, if you are able to contact them via e-billing. I see it is very low. From the information that you have, it is 0.7 per cent of your customer base. But it is so helpful. You do not have to go and line up anywhere. So that, that also links back to your operations. You do not need as many people to manage collections, et cetera. What is the strategy for rolling out a more aggressive e-billing campaign?

Mr. Thomas: I will let the CEO probably take this question but, you know, as you rightly said, I think we probably have not done as good a job, in terms of sensitizing the public as to the benefits of e-billing. I think probably we need to be a little bit faster in how we approach this issue.

Ms. Seepersad: And if I could just comment, and it really works well, because, like I signed up. As soon as you all put it out, I signed up. And I could attest, it really does work and save you time. I mean, I am sure I am not the only customer. So, maybe that is something you could build on.

Mr. Thomas: Absolutely. Shorter lines, people, you know, faster collection for us, you know, safety.

Mr. Chairman: Go ahead.

Mr. Poon King: We are looking to have several avenues for customers to contact WASA on various issues. So e-billing being one, and as you indicated, the response has been low so far. But again, this is another forum where we would be promoting it.

The other area is where you can pay your bill online as well. So that will also reduce the need to come in to our offices. And the other is we have the WASA services app, through which an app on your phone, you can also pay your bill, you can report a leak, you can request truck borne water. So we are looking to provide other avenues whereby members of the public and customers can interact with WASA.

Ms. Seepersad: Chairman, just one more question. If I could just touch on customer service? Because, what you find, what I have been hearing and experienced, is that you do call WASA and you report whether it is a leak or whatever issues that you have, and it takes a lot of follow-up on your part for them to fix the leak or to address the issue that you are dealing with. What strategies do you have in place for dealing with your level of customer service?

11.45 a.m.

Mr. Poon King: Okay with respect to having actions taken, you said in some cases you have a long wait, we have, and we having been doing follow-up. So if it is a phone call you have made to us and the issue has been resolved we would contact you by phone. If it is an email that we get we again contact you, and we are also on Facebook. I will say there are several areas that we are trying to get information in and to provide feedback even though the action that you requested may not be as quickly as it should be at least have the communication to advise you when we will be out there to correct problem.

Ms. Seepersad: Mr. Poon King, my expense is that there is very little follow-up. I mean it takes a lot of effort on your part. Whether it is a leak in front of my office, or a leak on the street—it really does and I am just telling you—this is the public information I am giving you. So it is an area that I think you really need to look into.

Mr. Thomas: I have actually had similar complaints from members of the public who would probably just see me and stop me and use me to report leaks. We have actually increased the amount of personnel in our call centre to try and address some of these issues because the reality is a lot of people even though we have call back features and you could leave a recording a lot of people primarily want to talk to somebody. They want to somebody to express their dissatisfaction or to register their complaint. So we have actually increased the amount of personnel in that area to try and address these concerns and to try and be a little bit more timely in terms of our feedback to customers as well as the remediation of the particular problem.

Dr. Henry: Morning. We heard quite a bit about leaks so far. I want to go post-leak and say, one of the main concerns, I think, people have with the public of leaks is when WASA comes and repairs a leak and what follows after, that it takes an inordinate amount of time before the road is brought back to normalcy. How is that supposed to work? I think people really are confused about how is that.

Mr. Thomas: That is a real issue that we are having. The Regulated Industries Commission has set out quite clearly the time frame we are actually supposed to try and repair—restore the roads after a repair is done. If I remember correctly it is supposed to be about seven days at the outer most. We have recognized the problem. Some of the challenges again, sometimes financial in terms of getting the required aggregates and the materials to actually conduct the repairs. It is actually a challenge and we have been—the Director of Operations has been trying to implement certain measures in his department to try and ensure that we actually comply with the Regulated Industry Commission's standards in this regard.

Dr. Henry: The question I am also asking is, what about the coordination? Because some people think it is the Ministry of Works and Transport and they blame the Ministry of Works and Transport for some of these issues. Is it really WASA responsibility or the—and what capacity do you have right now to do all this?

Mr. Thomas: You are quite correct. If we repair a leak it is the responsibility of the Authority to remediate that area, to restore the roadways if you disturb the roadways. That is very clear. In terms of—we try to coordinate as much as possible with the Ministry of Works and Transport in the event that they have works to do which will interface or interact with our pipelines at all so that we would not have a need to retrofitting as they say. Once they do their paving we have to go and disturb the roadways you hear about that a lot as well.

Dr. Henry: But, Mr. Chairman, is there a formal process of coordination or is it just kind of ad hoc.

Mr. Thomas: No, it is formal. I mean, they meet regularly with these agencies. The agencies meet and they discuss their plans.

Dr. Henry: Because, I know, people always comment on the fact that you pave the road now and you see somebody a day or two later, right.

My next question is changing gears a little bit. In terms of project management and so on, one of the things about WASA is, WASA is very huge the figures you called are quite large. This is a big agency and it involves a lot of projects and how is your project management department taxed up, I mean is that properly—do you have a proper project management and staffing and so on?

Mr. Thomas: I think we are properly staffed. But I will let the CEO—probably he could elaborate on this issue.

Mr. Poon King: So for implementation of projects we do have a project division. It is under the portfolio programme and change management, and we do have the staffing there, engineers, project managers and so on. In terms of capability, we have various types of projects that would be undertaken at different points in time. Depending on the complexity of the project we may call in to have an external entity serve as the project engineer on the project. But that depends as I said on the complexity and the magnitude of the project. But we do have the project—the division generally oversees all projects even those more complex that would be managed by the engineer, they have general oversight for those as well.

Mr. Chairman: Could you give the public an idea of the overall operational cost for WASA annually?

Mr. Poon King: The figure we had quoted is around $2.5 billion in total.

Mr. Chairman: 2.5?

Mr. Poon King: Billion dollars.

Mr. Chairman: Okay. Yeah, operational costs. Because did you include development costs and all of those things in it? I wanted you to have a sense of what is the operational cost? What is the revenue that WASA generates? What is the level of subsidy from the Government? And then I want—I suspect most of your developmental costs are met by PSIP or something like that. So I wanted to have a sense of how those four things kind of connect. So the operational cost is what?

Mr. Thomas: I just spoke to the Director of Finance, and she has confirmed that that is in fact the correct figure.

Mr. Chairman: 2.5 billion, operational costs.

Mr. Thomas: Approximately the operational cost.

Mr. Chairman: And how much revenue do you generate on your own in WASA?

Mr. Thomas: I would say about 700 million for the year; 700, in good times probably about 800.

Mr. Chairman: Okay. So that is $700 million. So the subsidy is the rest, 2.5 billion minus 700 million?

Mr. Thomas: Basically, yes please.

Mr. Chairman: Okay. Could I ask the PS, are there discussions with WASA about the level of subsidization of the entity, its revenue generation capacity and its level of expenditure?

Mr. Chairman: Okay.

Ms. Khan: Mr. Chairman, every year. In budgeting exercise once WASA produces estimates, the Ministry, of course, is very meticulous in trying to cut expenditures. The issue of overtime has received a lot of attention. But then, of course, because we were on this significant drive to fix leaks, repair leaks and then, of course, to reduce some of our contracted services where we had WASA personnel taking on the responsibility of some of the services as chairman Thomas indicated that went up.

Another area of concern for us was, of course, the spend on vehicles and rental of vehicles and we have been able to bring that down. But, of course, you know the significant costs in expenditure relates to the HR component—

Mr. Chairman: HR.

Ms. Khan: —and the HR numbers have been coming down through attrition, you know, numbers have been reduced. And then, of course, another significant component is the payment for desalinated water which, of course, is a critical part of our supply equation.

Mr. Chairman: Does the payment for desalinated water—how does that compare with the revenue you get from your industrial customers supplied with desalinated water? Do you end up with a deficit there as well?

Mr. Thomas: We do end up with a deficit.

Mr. Chairman: Is it high? How much is it?

Mr. Thomas: I would say about half comes from the industrial customers. Well remember a lot of this water also finds its way into our distribution system—

Mr. Chairman: System.

Mr. Thomas: —for the public as well.

Mr. Chairman: So that really is the problem?

Mr. Thomas: That is a large part of the problem.

Mr. Chairman: If you managed the desalinated water to supply industrial customers' needs only, and you were able to address the issue of the cost for that water, would you be able to offset the cost or make a profit? No.

Mr. Thomas: I do not think so. I think it was designed in such a way that some of that water would actually get into the system for the residential customers to supplement, to augment the supply to the customers who are in need of water in that area.

Mr. Chairman: Let me ask another question too having to do with the cost though. I mean a $2.5 billion cost. I do not know if it is fair to ask this question off the bat like this, but if you are to break that down in terms of the cost aligned to production of water, aligned to distribution of water, aligned to operations and the maintenance of the system, what kind of percentage breakdown you are likely to give me? You do not have to give me an absolutely accurate figure, but kind of ballpark figure.

Mr. Thomas: I do not know if the Director of Finance could help us with that? I do not have the—

Mr. Chairman: Okay.

Mr. Thomas: I do not think she has the answer as well. We could supply that information subsequently.

Mr. Chairman: All right. Could I ask—yes, would you supply that information in writing so that we can understand better the breakdown of the expenditure?

Mrs. Gopee-Scoon: Thank you, Chairman, and I apologize to our visitors for my late arrival, but I was at a Joint Select Committee on energy. So I may have missed the mark in terms of other questions already asked so you can just let me know if I am asking something that was responded to already.

What I really wanted to talk about is this 24/7 conundrum and also the non-revenue water and the cost attached to producing non-revenue water. And my research led me to understand that neither Trinidad nor Tobago is water-scarce. In fact, that we have total water resources 25 times the 2014 UN benchmark. Yet, still only 50 per cent of consumers receive 24/7 supply. And when compared to the rest of the region Trinidad and Tobago's consumption is about 83 gallons per day as against Jamaica's 35 gallons per day and their population is three times our size. Barbados 60 gallons per day, but they are so small I am surprised that their consumption is so high and WHO's recommended 44 gallons per day consumption.

So I am concerned, you could correct me, of this known fact that we do have the water resources and the fact that we cannot improve on our 24/7 wish for most citizens. But I understand that the gap there is really because of the non-revenue water that is produced and there is obviously a cost attached to that.

So my first question would be: What is the cost attached to the production of non-revenue water? And then also: What does WASA intend to do about reducing this non-revenue water? And again my research led me to understand that there is this international water association non-revenue water reduction model and it addresses the question of pressure management, leak detection and controls, speed and quality repairs, and pipeline and infrastructure asset renewal. So we know that WASA has certainly heightened within the last year on leak repairs and so on. But is there a project, is there a clear path towards non-revenue water reduction?

So main thing cost attached to non-revenue water in view of the background that I cited and also the programme for non-revenue water reduction?

Mr. Thomas: I will try and tackle part of your question, probably pass it off to the CEO after that. But you did a comparison with two other countries in terms of Jamaica and Barbados to look at the level of consumption per day. One of the major things that you would see in those jurisdictions, especially Jamaica, is that they are metered. They are heavily metered. And that is a large part of our problem here. The member had earlier asked the same question the question of metering. And that is a vital component in terms of trying to reduce that, you know, surplus what would be considered as surplus in terms of what the water consumption per individual.

We need to do more metering and that is certainly part of our plan in terms of how we tackle this particular issue of demand management. That in itself will reduce a large part of the problem. In terms of the pressure management and all these sort of things that is an important part to leak control and leak management. But in terms of the figures that you are asking in terms of the cost of the non-revenue water, I do not know if the CEO or the Director of Finance could probably address that part of the question.

Ms. Khan: Yes, Member to answer your question directly. First, there is a clear path. In my opening statement I indicated that the Ministry of Public Utilities working with WASA has been engaged with the Inter-American Development Bank to do all the analysis that sets out this clear path. In terms of non-revenue water our estimate is that it costs about TT $329 million a year to produce and in all it is given the commercial value of this water that it is about $500million in lost revenue associated with non-revenue water.

Mrs. Gopee-Scoon: Could you repeat the figure?

Ms. Khan: It is about $500 million in lost revenue associated with.

Mrs. Gopee-Scoon: Per what?

Ms. Khan: Per year.

Mrs. Gopee-Scoon: Per year, 500 million.

Ms. Khan: Yeah. So in terms of the clear path as the Chairman of WASA indicated metering is a critical aspect of that and we had indicated previously that we have projected that to take place over a five-year period. But in terms of other aspects of that clear path that we have, I want to pass on the water sector specialist who has been working very closely with the IDB and WASA on the strategy.

Ms. Govia: Thank you. Based on our analysis we found that on the infrastructure side apart from WASA's leaky network which is accounting for half of that between 40 for 50 per cent non-revenue water that you are recognizing. So half is physical losses and half is actually commercial losses which are again in the customer's fence line. So we recognize that on the infrastructure side there is need for metering to manage demand and there is also need for, of course, leak repair and strategic pipe replacement. But the other aspect of the 24/7 water supply is the de-bottling the network. So the Director of Operations will tell you that some pipes just cannot hold the capacity that is needed as well as this—I guess a lack of inter-connectivity in the network.

And then, of course, storage is a major issue. So on the infrastructure side of our plan, our analysis shows that those are the areas that we need to invest in to get 24/7 supply to the country. Storage and, of course, metering.

Mrs. Gopee-Scoon: On the other side is the administrative issues and I am saying competency in both management and non-management as well and the question of data, procurement and so on. Those are not easy fixes, but what is WASA doing about those kinds of issues? And address things like governance and accountability and so on.

Mr. Thomas: We have invested a significant amount in terms of technological technology, technology updates in terms of our systems to try and bridge the gap in some of these areas. For instance, in terms of the operations side of things in terms of the maintenance, the scheduling of jobs and risk analysis, invested in some software, I think the Maximo Software at a significant cost to try and address some of these concerns and bring us closer to what I consider developed world status in terms of how we address some of these issues.

Training is important as well. We spend a fair amount of time in terms of training even though we have cut down the expenditure in terms of training, but we try to impart—we try to do a fair amount of training to bring the staff up to speed in some of the more modern techniques in terms of leak repairs and so forth.

Mrs. Gopee-Scoon: And accountability?

Mr. Thomas: Well, the accountability side—that is the critical part of this entire thing in terms of the audited accounts and bringing our accounts up to date. That is extremely important. We have been keeping our eye on the ball in terms of these particular issues in terms of governance and the question of accountability. We have very clear guidelines set out in terms of what staff can and cannot do. The CEO and the other members of management have a clear directive from the board in terms of how to address these issues going forward.

Mr. Chairman: Thank you. Could you explain something to me? How it the per capita consumption of water in Trinidad and Tobago calculated? Because if you use the production numbers as you gave me without taking into account the leakages which are as high as 45 per cent it seems to me that you would have a problem with the result of your calculation for per capita consumption, you know. I mean that is a simple arithmetical problem, I hope that problem has not been made, that mistake has not been made.

Mr. Poon King: The per capita figure is an estimate.

Mr. Chairman: Yeah, I know, but what numbers are you basing it on? Are you taking into account the leaks and the leakages and the amount that is leaked? Because I thought the chairman said that this was a quantum for the leaks, a percentage quantum for the leaks. And then he said that may include household as well as the leaks in the pipeline system. You see I am suspicious of the high consumption figure that is attributed to the customer. I am just asking.

Mr. Poon King: So we do have meters installed in some connections.

Mr. Chairman: Yes. But it is only 5 per cent you said.

Mr. Poon King: But that gives us some—

Mr. Chairman: That gives you an idea of how much they consume?

Mr. Poon King: Correct. And based on that we also have some meters installed on our overall system; not enough, so we have to work on that as well. So it gives you an idea as to how much water is going into production and how much water is being consumed by the customer and with that—

Mr. Chairman: Yeah but you see this is my problem, because production numbers you gave me cannot be real given a leakage. You see this is where, I mean it is a simple calculation problem. If you have production numbers of a certain kind, but 40 per cent of that is not there then you cannot attribute—the only way I would find what you are saying credible is if you are able to tie your instrument measurement to existing customers and on the basis of an extrapolation of that, all right, of actual usage by the customers, the 5 per cent that you have, make an extrapolation as to what is likely to be the consumer usage per capita.

You see I am just questioning it because of the numbers that I heard today and it is something that is important because if you have the wrong figures, you are going to make bad decisions, you see. And I mean this is basic, if you have the wrong numbers you are going to make wrong decisions.

So I think it is important to check that and not simply use the figure because it sounds high and it is an easy rationale for doing a lot of things. I would be very careful about that. And for that I would also like an answer, a written answer that tells me how that number is calculated for per capita consumption in the country. Okay? Any other further questions? Go ahead.

Dr. Henry: I wanted to follow up on something the Chairman referred to. In terms of risk assessment and so on, do you a formal risk assessment process? For example, when you talk about the closure of Mittal costing the company 4 million in revenue per month, right, was there anyway that could have been seen as coming instead of waiting for it to happen and then reacting to it? For example, look at what happened recently in PTSC with the strike and so on. So do you have any formal risk assessment, contingency planning kind of operations, or do you have a separate department or people in charge of doing such things?

Mr. Thomas: In the Operations Department, I think they have risk assessment as well as in the corporate secretariat there is risk assessment profile. It is pretty hard for us to anticipate sometimes some of the changes at that level as to what changes will happen in a particular industry. I mean we are part of the community as well. We sit, we hear what is going on, we hear about potential closures on the industrial estate and we take that into account in terms of the sort of figures—in terms of our revenues and how it is going to impact our revenues. But in terms of the various departments, I will ask the CEO or perhaps the director of finance to probably give a little bit more elucidation on this area.

Ms. Wilkie: During the budget period each division would assess their risk. So each division should have a risk matrix.

Mr. Obika: Thanks Chair. So the question I had has to do with the issue of illegal truck borne water supply and on your report on page 41. The response was there are 327 instances of persons engaging in unauthorized supply of water to customers since September 2018. And then it goes on to say, the response, as it relates to illegal sale of water these matters were investigated, however, due to a lack of evidence no one was prosecuted. So, for example, I guess it would be the police providing any assistance as to what can be done to bring this matter to be something of the past. The other thing is—okay I will respond once you give me that response.

Mr. Thomas: Perhaps I will ask the Director of Corporate Services, Mr. Browne to elaborate on this particular one. But, for instance, illegal sale of water requires cooperation on the person who is purchasing as well. A lot of the time the person who is purchasing this water is not willing to come forward to give evidence to testify in such a situation. So I know of one or two instances where this sort of thing was investigated but it did not get very far because we did not have the cooperation of the various parties involved. But I will ask the Director of Corporate Services to elaborate further on this.

Mr. Browne: With respect to this particular item is that a lot of information is obtained in terms of where the water is being sold. But just to reiterate what the chairman said, the challenge is in terms of people coming forward to give evidence so that these persons could be prosecuted. And that is where we are handicapped in terms taking these issues further.

Mr. Obika: The question I have is, is there any other way to entrap persons who are selling the water? And I would imagine that persons from WASA may be aware of this happening, may even be intimate with them on an informal basis, because they are involved in the same sector. Is there any way to entrap persons who are involved in that process?

Mr. Thomas: Not sure I like the word "entrap", but at the same time this has actually been sort of a discussion between myself and the CEO as to how we can actually more or less catch people in the act. I do not think it would be wise for us to speak in the public domain as to actually what steps we are going to take, but we have actually had some discussion about what measures can be implemented to try and address this particular issue and see if we could, you know, actually as you put it, catch people in act doing this.

12.15 p.m.

Mr. Obika: And my last two questions have to do with the mention of leakages at the residential and commercial level, overflowing tanks and toilet bowls, and so on. The issue is T&TEC has registered electricians; I am not sure if WASA has a registered plumber, for example, system as widespread as T&TEC has. For instance, if you want to do your—I mean, I am not talking about if you are installing something—I am not talking about home construction, I am talking about just doing repairs. For instance, when T&TEC comes and takes your meter, for you to get it back, you need to have a registered electrician or a certified electrician do the inspection and do the installation, does T&TEC have that system so that people could trust—because many persons come and they may work on your tanks but it may keep overflowing?

Mr. Thomas: Well, we have—there are licensed sanitary contractors that are supposed to be the ones who are supposed to—

Mr. Obika: Sanitary license—who?

Mr. Thomas: Sanitary contractors.

Mr. Poon King: Constructors.

Mr. Thomas: Constructors, sorry. Sorry, licensed sanitary constructors, and those are the people that we have a register of the various persons who are qualified to do that kind of work. The truth of the matter is, it is not like electricity so that if somebody were to come and do that particular job there are no, you know, perilous consequences if you interfere with something like that. So it is hard to actually enforce it but we have a register of persons who are qualified to do this type of work.

Mr. Chairman: Okay. You wanted to say something, Senator. You had a question?

Ms. Seepersad: Thanks, Chairman, just one question. In terms of payment of bills, what is the criteria for determining whether a customer pays their bill in TT dollars or US dollars?

Mr. Thomas: That is a good question. A few of the companies on the industrial estate are actually charged in US dollars. I do not know what was the thinking that went into making that decision, maybe because they were multinationals and had access to funds, but I am not quite certain what was the thinking that went into that.

Ms. Seepersad: Could you give us some more information on that, because I think that could also speak to generating foreign exchange to also deal with your repayment of your debt?

Mr. Thomas: Absolutely, and I would also add, a lot of our bills are actually in US dollars as well, you know. With all of the desalinated water that we use—well, most of the desalinated water charges are in US dollars. So that is actually something we need to look at.

Ms. Seepersad: So if you could give us a written response.

Mr. Thomas: We can.

Ms. Seepersad: Okay.

Mr. Chairman: Member Mitchell.

Mr. Mitchell: Thank you very much, Mr. Chairman. Going back to the question of metering, I know that for new developments there is some approval process that has to go to WASA, is there an opportunity through the development of new developments or even the construction of housing units where WASA can mandate the positioning of meters—mandate?

Mr. Poon King: That arrangement is in place. So for new developments we ask for meters to be installed. The universal metering programme, that reference was made to earlier, deals with older houses and developments, and so on.

Mr. Mitchell: Okay. Yeah, because I saw a very nice system where you could just go outside and you just open whatever, and just lock off. Okay. To the question of benchmarking, the last time you all were here, there was a benchmark that you fell far out of whack, that is where fieldwork was concerned. I think the benchmark was seven employees for fieldwork and WASA was at 13, where is WASA now? Have you all addressed that issue?

Mr. Thomas: I am not quite sure it was 13, but in terms of—

Mr. Mitchell: It has that here in the document.

Mr. Thomas: Okay. In terms of that figure, bear in mind that WASA is doing a lot of the work that we would have otherwise contracted out, so we are actually putting what may appear to be a surplus, people into productive use, you know, improving productivity by using these employees. The benchmarks actually also did not encompass— that was just for water supply, the water side of things. Remember WASA also has a waste water side of things, so that is why you may actually see that the benchmark might be a little higher in WASA's case because we also have to take care of the waste water side of things.

Mr. Mitchell: Okay. And with respect to meeting the shortfall in production, I mean, desalinated water is quite expensive, what are your medium and long-term plans to meet the shortfall?

Mr. Thomas: We are currently engaged in developing new water sources and, you know, drilling new wells. That is an important part of our plan, as well as rehabilitating some of the old wells that have fallen below—over time they have fallen below their maximum yield for, you know, production purposes. So, right now, we are engaged in a lot of discovering new water sources, drilling new wells, as well as rehabbing some of the old wells to supplement that demand.

It is also important from the point of view that, you know, the surface water is challenged because of the harsh dry season that we just recently came through. So those are some of the measures that we are trying to implement to try and address that shortfall.

Mr. Mitchell: How long do you think would—

Mr. Thomas: Well, that is ongoing. That is ongoing, so right now we have actually brought on some new wells. In Tobago, for instance, they have brought on some new wells. In Trinidad, in, I think, in the Arouca area we brought on some new wells, and Granville as well, we brought on some new wells, and we are rehabbing—and this is a continuous process—we are rehabbing some of the old wells to try and make sure that the production increases and, again, drilling of new water sources.

Mr. Mitchell: What about dams?

Mr. Thomas: Well, what we look at right now is more storage, so there are more storage reservoirs that we are trying to construct. We have had some storage reservoirs that we have brought online within the past year. I think Hololo is one that jumps out at me. I think Tucker Valley as well. Yes. So those are some of the things that we look at. But what the CEO was just mentioning to me, he is just reminding me that, you know, in terms of— we have to actually also look at the desilting of the wells, desilting of the reservoirs so that the capacity will go back to its original capacity, because over time, you know, the silt deposits, you know, builds up in these reservoirs that causes the capacity to be reduced.

Mr. Mitchell: And these are the reservoirs that would give you the opportunity to capture water, the rainfall—

Mr. Thomas: Yes.

Mr. Mitchell: —in times of plenty that could assist us in times of need.

Mr. Thomas: That is correct.

Mr. Chairman: Okay. Member Gopee-Scoon, you still have a question?

Mrs. Gopee-Scoon: A simple one. We spoke about the non-revenue water and the cost attached to producing NRW, and, DPS, you said that you would have spoken in your introduction about the IDB approach. But just looking simply at the region—because you said Jamaica has done well with its metering and with the sole approach to NRW, and also the Bahamas, have you just explored the knowledge transfer from just within the region, our partners?

Ms. Khan: Absolutely. We have already— early last year, we did undertake a first site visit and there continues to be the collaboration with both countries, because they have gone through the experience of addressing non-revenue water and they have already begun to show very good results in terms of reducing it. So, yes, we continue to work with them, both the Bahamas and Jamaica in devising the solution going forward.

Mr. Chairman: Thank you. I am going to ask a quick couple of questions and then we are going to close up for today. Thank you very much for being with us and for answering the questions. Do you have a water capture and storage plan? Do you have that?

Mr. Poon King: I do not know the definition of a water capture and storage plan. What we would have is the overall water delivery plan which starts from winning the water ultimately to the delivery to the customer.

Mr. Chairman: You have a plan for increasing the winnings of water then?

Mr. Poon King: Right. So, well, as our chairman had indicated, yes, we do, the focus being on

wells and we have brought on wells across the country, both Trinidad and Tobago, and the other side, everything we do there is a supply and a demand component. So, yes, we want to bring on more supply and the supplies that we have to make it more resilient.
Mr. Chairman: Yeah, well, that is why I am asking the question.
Mr. Poon King: When you look at the volumes that we have, we have adequate volumes available so we need to look at both, getting additional water in specific areas and also, looking at the demand. And as the PS had indicated, all of that is part of the programme that would be reviewed under the IDB.
Mr. Chairman: Okay. And you have a receivables problem but what about WASA's indebtedness, how much is that? Is that a high figure?
Mr. Thomas: It is. Perhaps the Director of Finance could give us a little more clarity on that, but, you know—
Ms. Wilkie: It is $5 billion.
Mr. Chairman: Five billion?
Ms. Wilkie: Yes.
Mr. Chairman: How much of that is Government guaranteed?
Ms. Wilkie: Three billion.
Mr. Chairman: Three billion is Government guaranteed and two are without Government commitments. Okay. Thank you very much. I want to thank you very much for coming here this morning, Permanent Secretary, members of the Ministry of Public Utilities; also the Chairman and CEO of WASA and the rest of the staff who are here, and thank you very much for your cooperation in answering all the questions that we asked. We will ask for more information, and if you can provide that in writing to the Secretary, we would be grateful.
I want to say that, I mean, from our point of view here you have some big challenges. I know that steps are being taken to address some of those challenges but I would think that if you have a $2.5 billion operation, you have a $700 million revenue, continuing high subsidies in which the Ministry is always concerned about how much you get, you have this receivables problem to address, and then you have the high debt load which you are carrying, and you have a lot of people not supplied with water and a lot of unhappy customers. I think—I mean, a summary of those issues would tell you that you have a major challenge as an institution. And we did not even discuss here the developmental programme and the things that you are doing and the cost of that and what is going to be the impact of that, but we did discuss the IDB loan which would be another debt on the books. I suspect that that would be a Government guaranteed loan for WASA and that again increases the debt for something as basic as this which we need to have, we cannot do without it. Everything in the country operates on that. If your manufacture food, you manufacture any kind of liquid that is based on that, in addition to the basic needs of human beings who drink water and consume water and to have a relatively clean life.
So this is an awesome kind of responsibility in the context in which you find yourselves, and I hope that you will begin to address some of these problems seriously because they are very big

problems. They cannot be solved by one-shot measures, they have to be done by some kind of integrated approach to the management of these issues, you know. So I want to thank you for your forthrightness and your answers, and I thank you very much for being here today. I did not mention the press earlier, we are in a new place, as you know, and I was not able to discern but I want to thank the press for being present, and we hope that you will convey to the public, through the media, some of the issues that were addressed here.

I want to thank my colleagues as usual for being very responsible in the asking of questions and very pointed in their asking of questions of these agencies that we engaged. So thank you very much and have a good rest of the day.

12.29 p.m.: *Meeting adjourned.*