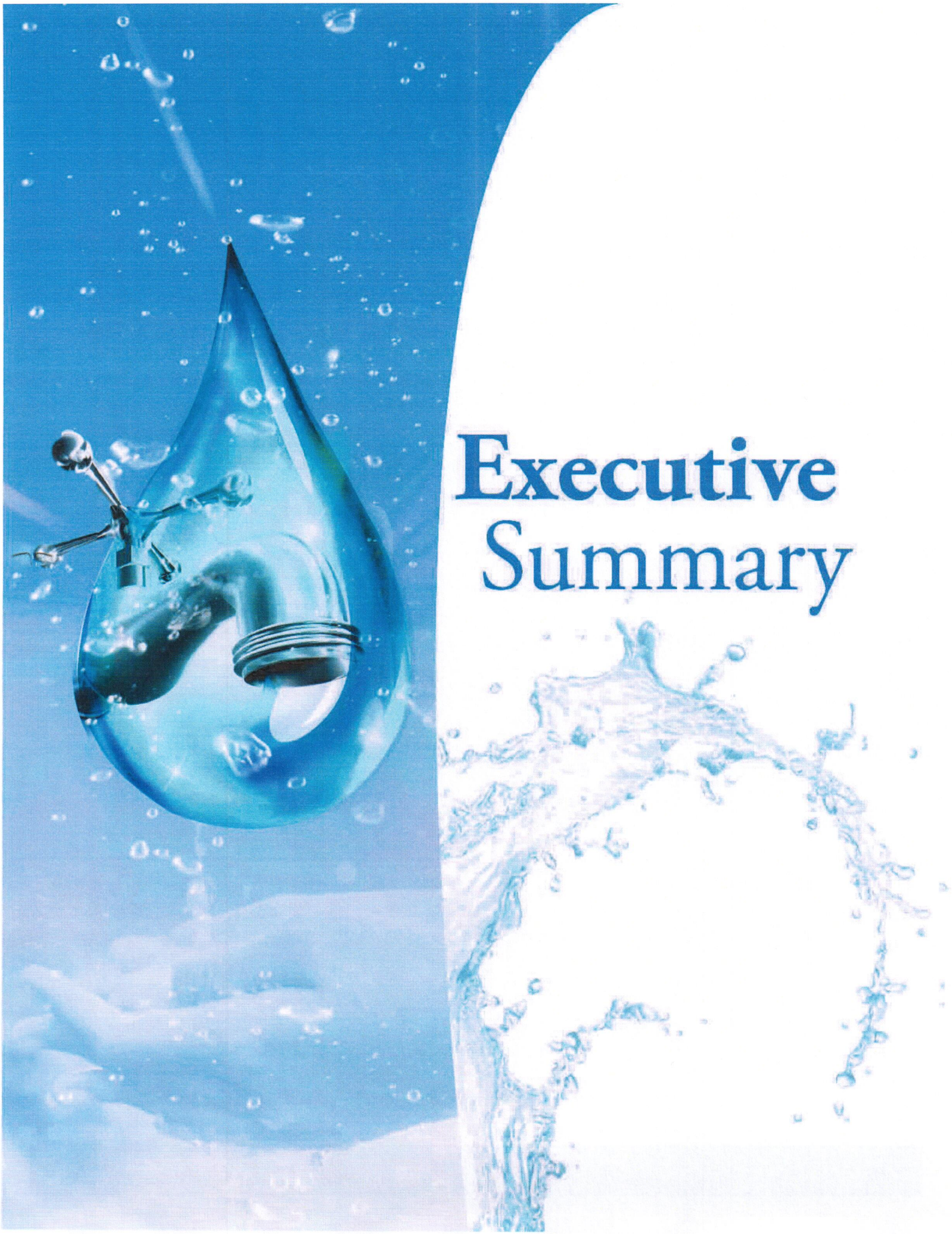
Report of the Cabinet Sub-Committee Appointed to Review the Operations of the Water and the Sewerage Authority and to Determine a Strategy for enabling the Authority to Achieve its Mandate

DECEMBER 11, 2020



Executive Summary

Executive Summary

The Current Model

Over time, the Water and Sewerage Authority (WASA) has become an unwieldy, overstaffed, unproductive, unresponsive organization that has deteriorated and is no longer efficiently serving the citizens of Trinidad and Tobago. In numerous instances and over many decades, efficiency was sacrificed for, inter alia, political patronage and management accountability exchanged for industrial stability, resulting in an organization in which there is little co-relation between the contents of collective agreements and the realities of providing a reliable service to the national population at an affordable, and acceptable cost to the taxpayers of Trinidad and Tobago.

The Sub-Committee has concluded that the dysfunctions inherent in WASA are so deeply entrenched that, in its current form, the organization is incapable of effectively satisfying its customers' demands and the State's mandate. Continuation of the current WASA model will therefore generate further decline and exacerbate the downward spiral in all aspects of the Authority's operation.

Maintaining the status quo leaves the State in the unsustainable and unacceptable position of continuing to fund, to the tune of almost two billion dollars ($2Bn) annually, an organization that lacks the ability to transform itself. Moreover, it will be an exercise in gross futility to ignore all the exigencies associated with attempting to operate/create an industrial entity by bringing together seven (7) government operated water production facilities (See Section 2.1.1) into one legal and organizational framework. This model has long outlived its usefulness and to continue conducting proverbial surgery on WASA in the hope that it would become efficient would be an exercise in futility.

The Sub-Committee is of the view that the only practical solution lies in the incremental dissolution of WASA in its present configuration and its replacement with the creation of a Water Management Company within a revised Water Sector model.

At its core, the new model for Trinidad and Tobago speaks to a water sector which is technology driven, customer focused and commercially viable, with an operationally efficient Water Management Company in the lead. Further, as this new orientation emerges over a period of three (3) years; the existing structure, WASA, has to be rationalised and wound down, transferring the assets of the old order into the emerging (structure) company.

The Sub-Committee has identified a number of Enabling Transition/Transformation factors that must be urgently addressed since they form the basis of the actual movement from the old order to the new. They include: establishment of a new water company, acquisition of water management capability, winding up and concessionary negotiations with the three (3) registered majority trade unions, aligned parallel operations, and technology enhancement. The Sub-Committee envisages the creation of a Transition Team/Contracted entity to conduct/facilitate this aspect of the transition.

Though cognisant of the fact that the country will need to invest in both the old and the emerging entities, the Sub-Committee is equally appreciative that this is the cost of the transformation. Funding will need to be available to address the bringing of the enabling factors

WASA's dysfunctionality at a glance

Corporate Performance

- For decades, WASA has been unable to deliver on its mandate – to provide a reliable supply of water at a reasonable price to the vast majority of the population
- By internationally and regionally accepted standards of 8 staff per 1,000 connections, WASA's current ratio of 13 staff per 1,000 connections renders it grossly overstaffed
- Project management is abysmally poor, evidenced by inordinate delays in execution (execution rate on capital projects of 51%), costly cost overruns, and unspent balances on PSIP with no commitments attached
- There are no corporate performance indicators to measure targeted outputs of within WASA
- The Authority is operating blindly. There is an absence of credible information in key areas relating to the Authority's operations e.g. customer data base, liabilities, staffing levels, payables, location of transmission and distribution mains, extent of non-revenue water
- WASA does not appear to have the will or capability to transform itself

into being. It will also be required to meet the cost of new technology, enhancement of WASA's current operating assets, treatment of debt, and other liabilities including employee separation cost. It is time for a **"Reset"** in this critical sector. The restructuring of the existing statutory authority is unlikely to produce the desired outcome.

Indubitable Facts

The decline in Government revenues arising out of the fall in oil and gas prices coupled with the cumulative financial impact of the COVID-19 pandemic has made it near impossible for the Government to continue injecting large sums of money into WASA without proportionate returns. And, even if funding was available, it would make no good sense to continue throwing good money after bad. After many years and several ineffective though costly interventions, the evidence points to an overwhelming lack of focus on comprehensive, sustainable, sequenced interventions, resulting in Government's investment being directed to ad-hoc projects that have not cumulatively improved the supply of water to the country. Despite receiving some $21.6 Bn. in Government subventions from FY 2010 to FY 2020, the Authority has been unable to fulfil its mandate with only an estimated 34% of the population currently getting a 24/7 supply of water.

Today, WASA is a dysfunctional organisation, which requires fundamental transformation.

The top-heavy Management of WASA is ineffective, and the contents of freely negotiated collective agreements reveal a philosophy of securing industrial peace by ceding control of the Authority to the Unions, to the point where

WASA's dysfunctionality at a glance

Organization Design

- The organization is extremely top heavy with a narrow span of control throughout the whole organisation
- WASA is overstaffed by over 2000 employees.
- Previous attempts at right sizing, inclusive of Voluntary Separation have failed
- The Operations Department maintains an "Interim Structure" which does not lend itself to collective achievement

Operations

- There is an absence of contemporary technology designed to improve operations while reducing cost.
- Both water quality and production have been trending downwards over the last five years
- Current state of technical capability is incapable of re-engineering the Authority's plant and equipment
- WASA does not follow a preventative maintenance system

the Unions have now effectively subsumed many management responsibilities. In some cases, the Agreements constrain the Authority from reengineering and introducing new and contemporary water management technologies into its operations, without first securing the Unions' approval. The structure of the collective agreements, in the main, is based on anachronistic public service ranges and job designs and consequently, bear neither relevance nor relation to an organization whose services are demanded on a 24-hour basis, seven (7) days per week for 365 days of the year. There exists compelling evidence as well that the Unions have become suppliers of goods and services to the Authority whilst it seems that management turns a blind eye to this reality. The Unions have also encouraged their members not to cooperate with Internal Audit in legitimate investigations of internal wrongdoing as well as to refuse to sign on to any Charter to improve accountability and good corporate governance within the Authority.

"Staff culture with an ingrained mentality of earning inflated remunerations without attendance addition of value and excessive union interference e.g. Union having to approve promotions etc. Union insisting employees refrain from signing Code of Ethics and Business Conduct, being interviewed by IACD, not signing as evidence of reviewing Policies and Procedures" Robert Subryan, Head - Internal Audit and Compliance

WASA's dysfunctionality at a glance

WASA's Financials

- High levels of unrecorded payables
- The annual allocation to WASA of approximately two billion dollars ($2Bn.) represents approximately 6% of country's budgeted figures for 2020. This allocation excludes debt and overdraft, which runs at one hundred million dollars ($100Mn.).
- Accounts Receivable is unclear since the WASA's billing system is inefficient and at the same time incomplete (relative to the number of connections)
- It is unlikely that the utility will meet its operating cost in the future (normal bench mark for successful water utilities)

There is a general lack of accountability pervading the organisation, and the existing organisational culture is the very antithesis of a highly productive organisation.

Further, successive years of under investment in asset maintenance and renewal has compromised and crippled operational efficiency. Spare parts, for example, are at a premium, and more often than not, a trade-off has to be made in terms of either undertaking necessary repairs or installing new connections, which has led to backlogs in both areas. Moreover, after decades of monopoly operations and $21.6Bn. in annual subventions from 2010 to 2020, the Authority does not currently possess the in-house equipment to effectively undertake one of its core functions (pipeline installation and repairs) and is heavily reliant on contractors to whom they are heavily indebted. The extent of this unquantified debt is the subject of a seemingly interminable verification exercise, resulting in a high level of unrecorded account payables. Account receivables have also been very high, with the average time taken to collect receivables being 188 days. Unsurprisingly then, the Authority's overall financial performance has been poor with chronic deficits being a regular feature. This is breeding ground for corruption and there is concern that there is a culture of corruption in the procurement of services by the Authority.

Investment in technology too has been sporadic and not always well integrated into the Authority's operations. Management of the transmission and distribution network has been equally inefficient, and has not leveraged innovative technologies to allow for automation and real-time monitoring and control of the system, which would ensure that water of good quality is efficiently delivered only when and where it is

WASA's dysfunctionality at a glance

Labour Relations

- The collective bargaining process is severely unbalanced in the Unions' favour and leaves little or no room for management to undertake its responsibilities and have any useful level of accountability from workers.
- Extricating the Authority from these arrangements is very unlikely in the face of the strong unions.
- Collective Agreements include traditionally non-negotiable items such as promotion, appointments that normally should be the prerogative of management, and constrains the organisation in terms of navigating industrial operating challenges e.g. certain types of leave.
- Senior levels of management are represented by the Union. This incestuous relationship renders bargaining in good faith a serious challenge to management, and restricts management's ability to redesign jobs, the dysfunctional organisational structure, or even introduce new and innovative technology. In short, it is virtually impossible for management to design a fit for purpose organisation

needed. Many of the operational processes such as leak identification, water redistribution, turn cork operations, water quality checks and meter readings, are still done manually.

Systemic Failures

WASA's intractable issues have manifested itself in the form of operational and service failures where hundreds of thousands of citizens are unable to get either a reasonable supply of water or a suitable and timely response to their plight. This is symptomatic of deep-rooted problems in the institution's mental model. WASA's Executives are not held to account, deploy very limited controls, are not effectively regulated, apply very antiquated, technology-deficient systems, and are generally devoid of an understanding of WASA's role, relationship and the consequences of the Utility's actions on the national population. This problem cascades down from the Executives to the rest of the organisation, spinning a vicious cycle that has led to public mistrust of WASA, an unwillingness of some customers to pay even one of the world's cheapest water rates, and WASA being unable to survive without significant Government funding.

WASA's Current State – Some Facts

- In 2019-2020, WASA's production averaged 218 IMGD[1] of water, while domestic and non-domestic demand is estimated at 155.4 IMGD. Non-Revenue Water (NRW) consisting of water lost through leaks and theft is estimated within the range of 40-50% (87.2-109 IMGD). The supply deficit in the dry season is 79 IMGD and the annual average deficit is 24 IMGD.

WASA's dysfunctionality at a glance

Organization Culture: The way WASA works

- The culture is a social benefits culture where work is peripheral to employees' benefits. Such benefits include car loans, vacation loans, study leave, and home to office allowance. These benefits are not normally associated with daily paid employment, for example, paid leave for religious reasons, and home ownership plans, neither of which is directly aligned to productivity.
- There is a mental model embedded throughout the organisation, inclusive of the unions and even some venders, that given the criticality of water to the population, the State is obligated to fund WASA's operations, regardless of its corporate performance
- Overtime is institutionalised and represents an average 15% of the monthly wage bill. The Collective Bargaining Agreement (Daily Paid) makes provision for equal distribution of overtime work to be divided among the various category of workers on the job.

[1] Imperial Mega Gallons per Day

The systems and data do not exist to corroborate this high NRW but with an average of 2,755 leaks being reported monthly, there is sufficient cause to inspire belief.

- Approximately 54% of water produced comes from surface sources, 26% from ground water, and the remaining 20% from desalination.
- Water is distributed to about 96% of the population, but 24/7 water supply is estimated to be: 59% in the wet season and 34% in the dry season for Trinidad, and 40% in Tobago - with homes augmenting supply through tanks.
- Total water storage across both islands is 14,729 IMG, which translates to less than 70 days (~2 months) of water, in the event that there are no inflows to any reservoirs. WASA's total storage per capita, equates to around 10,500 gallons, 38 times lower than the storage capacity of Jamaica (400,000 gallons per capita.)
- Centralised wastewater systems operated by WASA cover about 20% of the population, while another 10% are privately operated.
- Total assets are low compared to other water utilities, indicative of chronic historical investment shortfalls, and inadequate rehabilitation of the network.
- Revenue generated from the sale of water is gleaned from domestic customers (33%), Pt. Lisas (25%), industrial customers (25%), and the remaining 17% from commercial and agricultural users.
- Tariffs have not been increased since 1993 and is now one of the lowest in the world. The Sub-Committee has undertaken a review of the RIC process in order to ensure that timely action is taken by all relevant State Agencies (Appendix IV).
- WASA has a staff complement of 4,828[2] employees. This number does not include 47 members of the Executive Management Team, and 80 staff related to the Adopt a River Programme, Beetham Wastewater Project, Tobago Wastewater Project, Tobago Expansion Services Project and Customer Contact Centre Representatives. Staff costs (Wages and Salaries) represent approximately 177% of total revenue and 45.6% of total operating costs.
- WASA cannot cover its operating costs through tariff revenues. Consequently, WASA's operations, its solvency, and its financial sustainability are entirely dependent on funding and financing guarantees from the Treasury. The Treasury also services WASA's debt

[2] As at September 30, 2020

portfolio, which stood at $4.5Bn. as at September 30, 2020, inclusive of an overdraft of $469Mn.

Challenges to Moving to a Future Model

The Committee recognises that the challenges that confront the State, in its attempts to reform the sector and WASA as its agent, are significant and daunting. These are systemically complex and pose serious risks if carried over to any new configuration. Some of these are:

Outdated Governance Structure: The 1965 Water and Sewerage Act is outdated. There are conflicts between the Water Resources Agency, which is the resource regulator and WASA as the water operator. As an example of its outdatedness, the Act does not recognise the role of the Regulated Industries Commission (RIC) as the economic regulator, which has negative implications for the performance and regulation of the entire water sector. Additionally, there is the historical absence of performance-based accountability and an unacceptable lag in proper financial reporting. Altogether, this points to a governance model that reinforces and even rewards gross underperformance and negative practices. . The Authority envisaged under the Act is outdated.

Organisational Inefficiencies: WASA's machinery is frustratingly slow and reactive in almost all aspects of its business. The organisational structure is convoluted, is not Cabinet approved and is woefully short on internal coordination, control and accountability. The Authority has not been able to achieve any of its stated strategic targets over the past ten (10) years and has underperformed based on all standard performance indicators and in its capital works programme. Standard policies and operating procedures are poor, where they exist; and asset management is severely lacking. When compared to the regional benchmark of eight (8) employees per 1000 connections, WASA's staff per connection ratio of 13 employees per 1000 connections is unacceptably high, and has resulted in duplication and redundancy in business operations. The organisation also suffers from inefficiencies in fit at all levels, including at the Executive Management level.

Outdated technology and Poor Data Analytics: WASA's adoption of modern information and operational technologies is low. Management and operational systems have not been modernised to incorporate and fully integrate new and cutting edge technologies which are being

increasing used by utility companies globally to reduce cost, increase efficiency and enhance customer experience. Across the organisation, the Systems and Data architecture is poor and data analytics is not voluntarily embraced. This is especially evident in the Operations Division, where much knowledge is based on intuition and anecdotal data rather than on sound data and information. As such, the information emanating from WASA is manifestly unreliable and is not a reasonable basis for making sound policy and investment decisions. Technology has not been adopted and utilised to increase efficiency.

Demand/Supply Imbalances: A significant deficit exists between water supply and demand on both a regional (North, South, Central and Tobago) and temporal (dry and wet season) basis. This is primarily attributed to: a very high per capita consumption of water; inadequate interconnectivity within the transmission and distribution network; aged and inefficient network infrastructure, unaccounted for water, and inadequate water storage capacity.

Limited Development/Upgrading of Wastewater Systems: Wastewater management in the country has generally been neglected with centralised coverage at a low 30%. Many areas, particularly in Central Trinidad, do not have a centralised system while facilities and assets throughout the country are in dire need of upgrade/expansion/maintenance. This situation can have potentially disastrous consequences for public health and the environment.

Derelict Assets: Low tariffs and revenue collections, coupled with effectively no metering (4% of customer database) and an inadequate focus on existing infrastructure, especially those underground, have resulted in an aged distribution network that is challenged in servicing current demand.

High Non-Revenue Water: NRW is estimated in the vicinity of 40-50% which is high by international standards. This is due to a combination of an aged network infrastructure, poor water pressure management, the current system of supply scheduling, the time lag in fixing leaks, and the historical focus on putting new water sources into the system instead of concomitantly reducing NRW. As a consequence, there has been inadequate investment in the maintenance and upgrade of assets.

Financial Dependence on State Resources: Water utilities utilise a lot of power and are extremely capital intensive with most of their assets hidden underground. Years of neglected asset replacement, very low tariffs and revenue collections, plus high overstaffing have all contributed to WASA's current predicament. The operating deficit reached $2Bn. at the end of FY 2020 – with expenditure and revenue for the same period at $2.75Bn. and $709Mn. respectively. WASA has become accustomed to receiving large Government subventions annually - $21.6Bn. from FY 2010 to FY 2020, with few hurdles, without proper accountability, without penalty and with poor/inadequate governance. This has allowed the organisation to request and utilize such subventions without properly accounting for them (evidenced in the last audited financial statements being 2016); the absence of an acceptable policy framework; without strategic and business plans; and without a robust reporting framework that holds management and the Board of Commissioners accountable for performance.

Poor Project Management Systems: WASA's systemic planning, management and execution weaknesses have all but rendered it incapable of implementing its capital projects, whether simple or complex, on time and within budget. WASA's failings are also manifested in the number of legacy projects that have taken more than five (5) years to complete, with the *Refurbishment of the El Socorro Water Works* and the *Desilting and Rehabilitation of the Hillsborough Dam* standing out as prime examples of that inefficiency.

Heavy Reliance on Desalinated Water: The desalination plant at Point Lisas, was constructed to supply water to industrial customers on the Point Lisas Industrial Estate, its primary market. Water produced in excess of that requirement was to be used by WASA to supplement its supply to residents and businesses in south Trinidad. Overtime, with an expansion in the capacity of the desalination plant from 24mgd to 40 mgd, and with the recent closure of some plants on the Point Lisas Estate, a disproportionate amount of this water (28mgd) has been used to close the demand/supply imbalance for customers in South Trinidad. This over-reliance on desalinated water from Desalcott places WASA in a very vulnerable position and creates supply-chain risks and the associated higher costs of water production being effectively paid for by WASA. This vulnerability is manifested in the reduction of production levels by Desalcott from time to time, which is seen as a leverage to secure settlement of outstanding indebtedness to the company. Recently, production was reduced to 24mgd, but the supply has since been restored following negotiations. . The cost of the desalinated water coupled with the contractual requirement to pay

for same in United States Dollars has crippled WASA and resulted in a direct strain on the Treasury.

Corruption-laced Water Trucking Services: The delivery of truck borne water is based on request, and all customers with updated accounts qualify for the service. When requesting a truck borne supply, customers are required to call the Authority's toll free numbers. Water truckers, both contracted and internal, are not authorised to collect payment. Unmetered domestic and non-domestic customers with accounts in good standing are not supposed to pay for WASA's truck borne water. Only metered customers pay for WASA's truck-borne service through the addition of the receiving volume of water from the trucks onto their metered accounts.

WASA's truck borne service is inefficiently managed and, as a consequence, its operation is fraught with many problems, including lack of fit for purpose tankers, some of which are oversized and are unable to navigate narrow streets and steep hills, long queues and Call Centre challenges (see 2.4 Customer Service). This situation has rendered the service uncertain and unreliable, and has spawned the development of a thriving, parallel and illegal water trucking service, where hapless, desperate customers are willing to pay up to $400 for a truck borne water supply, the source of which in some cases cannot be verified.

High Customer Dissatisfaction: The population is unconvinced of WASA's ability to provide a reliable service, exasperated by the sheer inefficiency of its call centre operations, and mistrusting of WASA's management and staff to improve their offering. At all levels, WASA's customer services are unacceptable. Historically, the Authority has been unresponsive to customers whether it is fixing leaks, dealing with complaints, or delivering water. Customer dissatisfaction is further compounded by insufficient and reactive communication, especially as it relates to the consistency of service schedules, supply disruptions and billing queries.

Poor Management of the Water Sector Ecosystem: While many of the failures in providing reliable water and wastewater services to the population are a consequence of WASA's weaknesses, the vulnerabilities and shortcomings of the entire water sector ecosystem are pertinent contributors. There is no independent regulator of water resources resulting in WASA exploiting the country's freshwater supply without concern for operational efficiency. There is no coordination in the management of the water environment by regulators – EMA, Minerals Division, TCPD, Drainage

Division, Regional Corporations, etc. – resulting in rampant degradation of the natural ecosystem that protects and sustains the country's freshwater resources. The RIC, as the independent economic regulator has not demonstrated focused attention to the water sector as it has for electricity. The quality of service standards have been in draft form for the past 3+ years, there has been no active push to review the principles of water rate setting, and WASA is left untouched when it does not answer to the RIC.

Pressing the Reset

Trinidad and Tobago is currently navigating its way through some difficult and precipitous economic headwinds and Government is doing its part to keep the ship of state steady. The present state of our water sector can aptly be described as being so deep in crisis that it can imperil our socio-economic well-being and national stability.

With consistently declining national revenues due to low prices in our petro-chemical sector, and the debilitating effects of climate change, environmental degradation, wastage, chronic mismanagement, poor corporate governance, lack of maintenance, aging infrastructure, low tariffs, higher demands from a growing population, mounting debts, unaccounted for liabilities, weak financial realities etc, the Authority is now faced with the perfect storm and is struggling to maintain a semblance of national stability to provide citizens with a reliable water supply and wastewater services. A well-documented IDB report, described the amalgamation of these deeply entrenched challenges as the ***"Spiral of Decline."***

A Government of Trinidad and Tobago that is committed to re-positioning the country to survive in the post-pandemic new order, must accept the challenge to take bold and decisive action to stabilize the possible collapse of the water sector and to engage in a process of urgent organisational reconstruction of WASA and, in so doing, protect the national interest.

As envisaged by this Sub-Committee, the process of reconstruction will require decisions that, while politically unpopular, are necessary to protect the overall national good. This Sub-Committee recommends that given the national exposure and in alignment with our oath of office, sound decisions must be adopted to protect the citizenry from declining availability of water in the Authority's distribution grid.

The evidence is as clear as it is compelling that by international indicators, WASA has failed as a utility company both in the provision of a reliable water service to the country as well as its organizational structure. The Water Resources Agency has been crippled and has not been performing its role as a regulator in the industry. The Agency has not been doing its work in the areas of scientific research to explore new sources of water and to regulate existing practices that expose the country's water resources.

The Sub-Committee has concluded that WASA would be unable to transform itself into a high performance utility given in its current configuration and with its current leadership, management capability, systems and culture, to transform itself into a high performing public utility.

The Sub-Committee holds the view that now is the time to **Press the Reset** and move towards a high-quality performance water utility, with a governance framework that is designed for performance and accountability and with the concomitant legal and institutional capacity.

In designing the institutional architecture, the Sub-Committee has been guided by the following:

- Water is increasingly becoming a critical resource for all countries, and will undoubtedly continue in that trajectory given the worsening impacts of climate change and climate variability;
- International best practice has demonstrated the criticality of separating the water resources regulator from the water utility, to ensure sustainability and equity in the utilisation of water;
- Wastewater management has emerged as a specialist field;
- There has been a paradigm shift in water resource management with the adoption of new management approaches and significant increases in the use of technology;
- Contemporary business water management models have shifted to demand management rather than production and engineering as its base, as is the case of the current WASA model.
- Aligning the water utility with the value chain inherent in water management provides the opportunity to increase operational efficiency and achieve sustainability in water resource management.

Alternate Options for the Water Sector

The Committee considered three (3) options for the Water Sector:

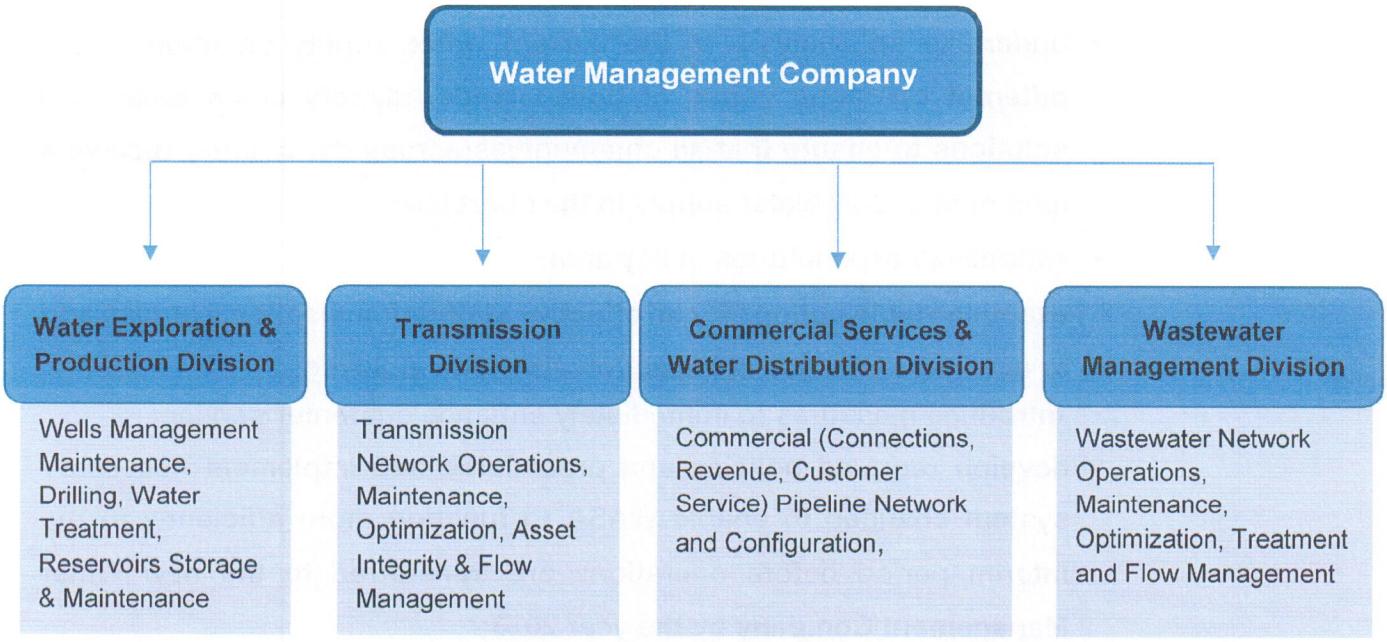
- Option A: Create Private Sector Partnerships
- Option B: Restructure the current WASA organization
- Option C: Adopt a Water Management Corporatised Model

Descriptions of the consideration of each are presented in Section 3.1 of the Report.

Recommended Option for Managing the Water Sector (Option C):

The Sub-Committee recommends the adoption of a Water Management Corporatised Model that is consistent with the water value chain and structured as follows:

- A Water Resources Agency that is independent of the water and wastewater utility. A Note is before the Cabinet on an Integrated Water Resources Management Policy which, *inter alia*, recommends the establishment of an independent Water Resources Agency. Towards this end, the Sub-Committee recommends that the WRA be established as a department under the Ministry of Public Utilities;
- A New Water Management Company: Publically owned water company that maintains all the State's Interests (Above & Below Ground Assets) with operations aligned to the water value chain as follows:
  - An Exploration and Production Division (Wells Drilling, Water Treatment, Reservoir Storage & Maintenance
  - A Transmission Division (Pipeline Maintenance, Optimization, Asset Integrity & Flow Management)
  - Commercial and Distribution Division (Pipeline Network and Configuration, Revenue, Customer Service etc.)
- A Water and Sewerage Authority (WASA) that holds and manages the non-operating assets of the State that are currently vested in the Authority; and
- A wastewater entity managed by the new Water Management Company with Private Sector participation.



ES Figure 1: Water Management Company

Transition to the New Model

The Sub-Committee is cognisant of the fact that rationalising the existing WASA will entail time and political will and, therefore, recommends the creation of an Interlocking Board and possibly a Committee designated to oversee and implement the process with both reporting to a Cabinet Sub-Committee which includes the Minister of Public Utilities, in order to facilitate an efficient transition to the new Water Sector. Presented below are the critical action items.

- Separate the Water Resources Agency from WASA;
- Establish a performance agreement and timelines for the Board and the Committee to achieve the Government's policy intent;
- Appoint an Interim Management Team, headed by an individual with extensive knowledge of, and experience in leading transformation in, the water sector and comprising a core group, in accordance with a rationalised structure, with skills and competencies in water management. The Interim Management Team will have responsibility for:
    - working with the Board of Commissioners in the transitioning process;
    - stabilising the operations of WASA to prevent further declines in the level of service to the population and financial haemorrhaging. The Team will be required to:

- ✓ **undertake an analysis of the current water supply situation in the different operating zones of both islands, identify crisis areas and solutions to ensure that all communities across the country receive a minimum of 24/2 water supply in the short term;**
- ✓ **rationalise expenditures in key areas;**
- ✓ **examine viable options for an effective staff rationalisation exercise and to ameliorate the social impact on affected employees;**
- ✓ **introduce measures to immediately enhance customer service;**
- ✓ **develop required policies and procedures and implement necessary system changes to enable WASA to function more efficiently in the interim period before operations are transferred to the new Water Management Company by the year 2023;**

  - implementing a new project management system for the implementation of the PSIP to stabilise the water supply environment in the short term. The track record of the current PCM Division, especially as it pertains to its role in the management of key infrastructure projects of the Authority, demonstrates that this Government will be making a grave error to allow the current Unit to manage a programme of works geared towards bringing short, medium and long term solutions to the state of the water sector in the country. The Committee recommends an immediate restructure of the Unit;
  - Developing a roadmap to remove the country's reliance on desalinated water, particularly in the area of potable water;
  - removing road restoration, following civil works by WASA, from under the purview of WASA to the Ministry of Works and Transport (MOWT);
  - defining a strategy and action plan for private sector participation in key elements of the water value chain and in wastewater;
  - setting the foundation for transformation to the new Water Management Company;

- Procure the services of an international Water Management Operator to support the transition to the Water Management Company;
- Procure the services of international expertise to optimise network performance and transform key elements of operations such as leak management, water storage facilities, billings and collections;
- Facilitate the requirements of the RIC for an urgent Tariff review;

- Appoint technical teams to:
    - implement new institutional arrangements, conduct an HR audit, identify transitional and permanent staff, create the organisational structures with role definition and process maps for the new water and wastewater utility;
    - undertake a full assessment/audit of WASA's water supply and wastewater assets. The team should locate, assess and verify the usefulness and ownership of the asset;
    - conduct an assessment of WASA's technological capability;
    - gather data and develop the scope and targets for a performance-based contract (PBC) for an international Water Management Operator;
- Adopt an Agile Change Approach in defining and designing the new water management model while navigating the rationalisation resizing and exiting of the old model;
- Develop a detailed risk assessment and mitigation strategy;
- Develop and implement a Transition Framework and Strategy over a period of approximately three (3) years that addresses the key enablers for the transition to the new water sector management model;
- Undertake a detailed validation exercise of WASA's liabilities (recorded, unrecorded and on Government books);
- Rationalise WASA's expenditure to separate core services from non-core services, and assess the cost-effectiveness of subcontracting certain functions;
- Acquire water management expertise (International Water Management Operator) for a period of three (3) years that will support the Interim Management Team and the CEO of the Water Management Company to establish the Company and transition to full operations. The current deeply rooted institutional arrangements and the exposures faced by the WASA will militate against Government's thrust for urgent organizational restructuring. Pressing the reset may be the perfect opportunity for a new organization to be established under the Companies Act, with the assistance of an International Water Management Company. This can be done using a Performance Based Contract that holds the company strictly to timelines and clear deliverables;
- Develop and execute a work plan for the transfer of assets and wind-up of WASA;
- Design and action a broad-based Transition Communications Strategy that informs, educates and influences all stakeholders in a manner that views them as significant partners in the country's transition to a new and productive water management sector; and

- Source an appropriate mix of multilateral funding (grant and loan resources) and Government to Government agreements to finance improvements in water supply to the population, the establishment and operationalising of the new institutional arrangements for the water sector, and the transition arrangements.

Strategic Pillars to Guide the Transition Process

The Sub-Committee recommends four (4) strategic pillars to guide the management of the sector over the next three (3) years:

1: Stabilise the operations of WASA and build public confidence in the Operations of the Water Sector and Government's Strategic Intent;
2: Improve Operational Efficiency and Customer Service;
3: Strengthen Financial Management; and
4: Restructure the Water Sector.

The timeline envisaged for the transitioning to the new institutional arrangements and the schedule for the implementation of critical actions under these four (4) pillars are provided at Appendix I and Appendix II, respectively.

Risks

The risks associated with the transitioning must be closely and continuously assessed and managed. The major risks identified by the Sub-Committee are as follows:

- The State will need to maintain and stabilize the supply of water during the transition;
- The transition cost and funding required for moving from the existing model to the new model will be a risk and must be assessed early;
- The cost of maintaining two water entities is prohibitive and may have to be addressed in phases;
- Trade Unions will be reluctant to support the transition and engender employee dissatisfaction and the withholding of labour;
- The operations knowledge of WASA is highly intuitional, largely undocumented and reposed in individuals who might not be minded to share such knowledge with those outside of their circle; and

- The mistakes of previous attempts at reform and right-sizing are repeated. The VSEP exercise of 2012-2015 e.g. cost the Authority $396,579,367 for 2352 employees but the employee population remained at a consistent level of 4844, 5350, 4910, 4833, and 5285 in the years 2011-2015.

The Sub-Committee has also identified an indicative programme of infrastructure related investments for implementation over the next 24 months in order to increase water supply, improve network efficiency and capture essential data to manage distribution more effectively (Appendix III).

Financing

The transitioning to the new model comes with new and significant financing needs as the operations of WASA are stabilised and the new Water Management Company is formed and operalionalised. Investments would be needed not only in new infrastructure and new technologies but also in the maintenance and operations of the existing stock in order to improve efficiency and reduce water losses. The 'plane would need to be fixed while flying'.

With respect to financing, the Sub-Committee had valuable engagements with senior officials of the Inter-American Development (IDB), Corporación Andina de Formento (CAF) and a consortium comprising Water Works Caribbean Inc. (WWC), a Barbados based water delivery and management Company, Seureca - the engineering consulting group of Veolia France and Remicatyn Ltd. - a supply chain consultancy company registered in Trinidad and Tobago.

The Consortium proposes the possibility of a Government to Government Agreement with the Government of Germany. Both IDB and CAF offer a mix of technical cooperation and loan financing. In addition, the International Finance Corporation (IFC) has identified five (5) possible projects for implementing PPPs. The best option will have to be explored and options are not limited to those described.

Conclusion

Trinidad and Tobago needs to adopt a modern integrated water management strategy for the water and wastewater sector. Restructuring the way that water is delivered to the national

community will lay the platform for the change the country desperately requires. The current state of the country's finances, and public expectations in terms of customer service, all militate strongly against the State maintaining the status quo.

WASA's current structure, culture and institutional arrangements cannot respond to the water supply crisis now faced by the national community. A new organisation must be created in order to fashion an organisational culture and competencies that lend itself to organisational change and more appropriately, should be designed along a business value chain that utilises, inter alia, technology and modern water delivery systems resulting in more efficiency. The transition must be predicated on new technologies, sound governance model and a healthy balance between a production/engineering and demand management. The establishment of a new organisation is as necessary as it is urgent. A new start will bring a business-orientation, public ownership and workforce arrangements that are relevant, modernised, and in alignment with the service levels demanded by the entire country.

The Sub-committee is of the view that as a country, we are more than capable of undertaking the difficult task that lies ahead as we now seek to place our water sector on a sustainable path. In this regard, a sub-committee of the Cabinet should be established to provide strategic oversight and guidance during the proposed transformation of the water sector for and on behalf of the citizens of T&T.