NATIONAL WATER SUPPLY & DRAINAGE BOARD CORPORATE PLAN 2020 - 2025



GOVERNMENT OF DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA MINISTRY OF WATER SUPPLY

Vistas of Prosperity and Splendour

66 Water resource management has become an important discussion point and is vital economic development for only 45 % of the population has access to the pipe - borne water supply .Water ways have also been polluted, thereby compounding the problem of providing safe drinking water to all. It is our intention to meet this challenge and ensure 100% of the population is provided with clean and safe drinking and pipe - borne water.





Message from Prime Minister

Hon. Mahinda Rajapaksa

Prime Minister Democratic Socialist Republic of Sri Lanka

It is with great pleasure that I send this message on the occasion of the launch of the National Water Supply and Drainage Board (NWSDB) Corporate Plan/Business Plan 2020–2025, which I consider to be a historical milestone in providing access to safe drinking water for all – "සැමට ජලය" – fulfilling the pledge given in the Government vision for drinking water in the "Vistas of Prosperity and Splendour."

Water supply and sanitation services are critically important to the health and wellbeing of our citizens, the vitality of our economy, and our prospects for national development and prosperity. "Water for All" is a sincere pledge given to the people in the National Policy Framework "Vistas of Prosperity and Splendour." The policy of the Government is to prioritize the longterm sustainable management of our water resources, both in terms of quality and quantity, as well as measures to improve the provision of sanitation in Sri Lanka.

While Sri Lanka is blessed with many natural resources, the demand on our water supply is growing at an alarming rate. In addition to domestic consumption, several other sectors, demand and utilize water, including commercial establishments, agriculture, industries and recreational activities. Therefore, great care must be taken to manage our water resources and supply network. In this regard, the Corporate Plan/ Business Plan 2020-2025 of National Water Supply and Drainage Board has outlined the road maps for providing potable water for all. The Corporate Plan clearly articulates the overall improvements in the sector, as well as the constraints, and the general direction and vision for the water sector, including



strengthening the nation's infrastructure for storage, treatment, distribution and the conservation of water sources.

The vision of the Government is to provide pipe borne water facilities to 4.7 million families in the next four years by implementing medium and large-scale water supply development projects. These projects are being implemented with local and foreign funds through local contractors and will require the laying of 40,000 km of new water supply pipes.

I am very happy to learn that all these water supply projects have been designed by Sri Lankan engineers using modern technologies. Ancient Sri Lanka boasts a distinguished hydraulic civilization, which has brought strength to the field of water technologies. The NWSDB is anchored by these ancient practices and, with over half a century of experience as a pioneer organization responsible for providing water supply to the nation, looks optimistically towards the development envisaged in the water sector at the dawn of the new millennium.

In addition to providing potable water to urban communities, it is equally important to maintain well-designed rural water supply systems. There needs to be an urgent focus on the drinking water quality in certain regions of Sri Lanka where significant parts of the population are suffering from Chronic Kidney Disease. Therefore, Community Based Water Supply Systems (CBOs), as well as Water Supply Schemes managed by local authorities, need continual backup support, which should be institutionalized in order to ensure sustainability. In an attempt to save water resources and to minimize wastage of public funds resulting from the duplication of work, the Government is also focusing attention on encouraging an integrated development approach between the Water Resource Department, Mahaweli Authority, Road Development Authority and the National Water Supply and Drainage Board.

The Government is also fully aware of the critical relationship between our water resources and the state of the natural environment, including the critical need to manage our watersheds. Climate change and weather pattern variations also impact our water resources and are likely to be the most consequential for water sector development.

Guided by the principles of integrated water resources management, a high-powered committee, appointed by the Cabinet, is currently working on developing policies for watershed management and integrated water resource management.

As our agencies continue to work to increase the availability of potable water for Sri Lankans to 100 percent by 2025, I can state, with confidence, that the Government is committed to expanding and improving the potable water supply network throughout the island to make way for a strong and healthy nation.

Message from the Minister

Hon. Vasudeva Nanayakkara

Minister of Water Supply

As the Minister in charge of the drinking water sector, it is my first and foremost task to inspire and galvanize the Ministry and the NWSDB towards achieving goals and objectives of the government with a devoted commitment to the people of Sri Lanka. His Excellency the President Gotabhaya Rajapaksa has clearly elaborated in his Vision of Prosperity, of the government's aspiration of providing safe drinking water to all the people in Sri Lanka.

In numerous instances, our Prime Minister, Hon. Mahinda Rajapaksa in his vision statement, has very clearly mentioned and highlighted the necessity of providing safe drinking water to everyone in the country.

Providing safe drinking water to the people of the country will ensure the enhancement of living standards and health conditions which in turn will give a healthy work force to achieve the expected economic and social revival of the country. Furthermore, provision of safe drinking water to everyone is a social responsibility and in my opinion is a fulfillment of basic human rights.

The government is wholly committed and supportive of achieving this objective. The NWSDB, as the prime Organization of drinking water supply, has a huge commitment and responsibility for supporting the government's agenda in fulfilling its vision and aspirations. When I assume duties as the Minister, it was my first observation and expectation that NWSDB would come up with a well-prepared master plan, and a clearly designed road map for achieving the major goal.

There had been some instabilities in the NWSDB, but with the able-leadership of the Secretary Dr. (Eng). Priyath Bandu Wickrama and with far-sighted guidance of



the Chairman Mr. Nishantha Ranathunga the NWSDB has now come up with a wellorganized and well-structured Corporate Plan and a Business Plan giving specific and clear strategies in fulfilling the government's development agenda and meeting the aspirations of the people of this country.

Providing access to safe drinking water should not be limited to a Corporate Plan or a Business Plan. It shall be our dream, our hope, our expectation and the ultimate purpose. Achieving the government's goal shall be the driving force in fulfilling a basic human right. I am sure that, all the employees of the Ministry/NWSDB have now been galvanized and inspired and well-directed with the able-leadership of the Secretary, Chairman and the Board of Directors who are deeply committed towards supporting the government in realizing the vision.

The clarity I thought reflected in the Corporate Plan is to be noted with appreciation. I learned that the Corporate Plan had been developed through an in-depth consultative process where the ideas and opinions from the grassroot level up to the top had been obtained through discussions and consultations.

The Corporate plan is an in-house effort of NWSDB employees, in which it reflects their own ideas and concepts based on their valuable experiences. This Corporate Plan has evolved through internal discussions and agreement reached is very much stronger than a document that had been produced by external consultants. I am very pleased and proud to see this plan as the outcome of our excellence. In my opinion it is very well detailed and it depicts a way - forward with clear objectives and time-lines.

Message from the State Minister

Hon. Sanath Nishantha,

State Minister of Rural and Divisional Drinking Water Supply Project Development



Providing sustainable solutions to ensure water security in Sri Lanka presents a great challenge to our mission in making a difference and provide access to clean water and safe sanitation for under-served and yet-to-be reached growing Sri Lankan population. As the Minister in-charge of Rural and Regional Drinking Water Supply, it is my aim to serve the rural community, while upgrading their living standards by ensuring access to safe drinking water.

In an era where the world is moving towards, Sustainable Development Goals (SDG), the Goal 6 specifically calls for safely managed water and sanitation for all by 2030. This has given new impetus to long-standing efforts by governments and other development actors to dramatically step up the process of ensuring access to water and improve sanitation. In line with this, as the prime agency responsible to deliver safe drinking water supply & sanitation, the National Water Supply and Drainage Board (NWSDB) officials are striving toward making a special effort to have 100% pipe borne water coverage by 2025, hand in hand with the Department of National Community Water Supply. Accordingly, the NWSDB has developed the Corporate Plan/Business Plan to expand the service coverage, beneficiary network and thereby meet the national targets.

I firmly believe that the NWSDB staff is capable & knowledgeable and will work in partnership with relevant stakeholders, multi-disciplinary professionals for application of innovative, reliable, costeffective water & sanitation solutions. It's true that with financial difficulties and administrative complexities that the NWSDB is faced with, it cannot work alone to meet the set goals and fulfill the target.

In this regard, we expect to overcome the key challenges by following strategies such as establishing stringent water rights, strengthening the laws, empowering stakeholder agencies and minimizing catchment pollution.

Accordingly, NWSDB can work on largescale, medium-scale Water Supply Projects while continuing to assist on major technical issues of the Community Based Organizations (CBO) managed water supply schemes. So, the NWSDB can build partnership, assist the Department of National Community Water Supply to improve the CBO managed water supply schemes that will cover the rural, remote beneficiary network which cannot be reached out and served by the NWSDB.

In this context, we need to find better ways if we are going to meet today's demands and tomorrow's challenges. As I strongly believe, with the NWSDB technical expertise, experience, and innovative technologies, we will be able to cut down operation costs and broaden water supply applications to increase the coverage of safe drinking water supply to the entire nation by 2025.

I thank you all for your untiring effort and wish for cooperative years ahead to see the desired outcomes in the NWSDB Corporate Plan/Business Plan (2020-2025).

Ministry Secretary's Message

Dr. (Eng). Priyath Bandu Wickrama Secretary Ministry of Water Supply

As the Secretary to the Ministry of Water Supply, since the beginning of year (2020), I have dedicated most of my time for the drinking water sector planning and development activities. The safe access to potable water is a burning need of almost half of the population in Sri Lanka, and the distribution of it is identified as one of the most significant criterias for the country's economic development. This sector needs to go through a paradigm shift to fulfill the aspiration of the government. To achieve this uphill task of providing safe access for drinking water will be facile with the firm leadership of our President, His Excellency Gotabhaya Rajapaksha, passionate leadership of our Prime Minister Hon. Mahinda Rajapaksha and with our prudent and holistic adviser, Hon. Minister Vasudeva Nanayakkara's perpetual support.

With the expectancy to omit all of the perseverance with government's the guidance, National Water Supply & Drainage Board has taken up new strategies after delving into research and details and looking forward to achieving its epitome objectives. This includes increasing the water supply coverage from 50% to 100% by the year 2025 ; while making water ubiquitous to the vast majority of the population. Accordingly, we are anticipating the unity and parallel planning between the National Water Supply & Drainage Board (NWSDB) & the Department of National Community Water Supply (DNCWS). Areas that cannot be covered by the NWSDB will be covered by DNCWS, completing the need for water prerequisites in the pertinent areas. In Sri

Lanka, 5% of the populace has the sources and have access to water. However, those ought to be planned well with water sanitation projects to improve the quality of water. NWSDB plans to accelerate its efficiency by ascertaining the country's quantity of water, while understanding what ought to be used for the drinking, agricultural and irrigational usage. Acquainting more specialized ways with the technology to be introduced in order to have a proper integrated water management system, while having an appropriate water sharing policy among the irrigation, agricultural and drinking water sectors. As well as taking a significant consideration on preserving water sources, expanding the limit of water catchment areas, and presenting more progressed methods of reducing the waste collection in rivers, streams had been considered in the plan. Additionally, in view of the expansion of groundwater utilization by mankind and its repercussions had led to such negative circumstances, we have executed to change over and deal with the contamination done by the people. As a consequence of the constant development of the country, infiltration of water to the ground had been limited and this has effected the formation of soil. The above issues had been taken in to consideration and have executed numerous solutions for these. For example, building ground sumps at homes for the populace's utilization, implementing new methods for the commercial consumers to recharge with the use of rainwater and laying pipes for more than 40,000 kilometres have been the focal of the Ministry of Water Supply with the support of National Water Supply

& Drainage Board (NWSDB), Department of National Community Water Supply (DNCWS) and Water Resources Board (WRB).

In this plan vast majority of the responsibility falls under NWSDB to provide safe drinking water access to the entire nation by the year 2025, according to government policies. It is said, if there is an objective that should be accomplished to reach in ten years, the best strategy to make it happen is - to think how it can be managed to achieve in a year. Hence at a breakneck speed, the NWSDB has implemented strategies from "immediate" to "medium-term" to "long-term" in terms of achieving them laterally. To achieve the goals elaborated in the plan, we have originated out of the box approaches and strategies. The capacities of water treatment plants have to be optimized, and stage-wise investment planning must be adapted to optimize the limited funding to be managed within the available fiscal space. The nonrevenue generating assets that are not fully utilized in water treatment plants shall be immediately utilized to expand the service and generate additional revenue. Secondly, all the mega projects to be restructured to derive immediate and medium-term benefits by repackaging. The long-term demand needs to be catered at a later stage to optimize the available funding without exceeding the allocated fiscal space to the sector.

During the last five years, the investment made was well over Rs. 300 billion. However, it has been transpired that there are deficiencies in these projects, such as over capacity of treatment plants and distribution systems not being completed. I have engaged with the NWSDB to ensure necessary assessments to identify the water supply schemes & water treatment plants that can be expanded with the minimum amount of investment, which will bring immediate benefits. The treatment process could be enhanced by introducing improved process designs and expanding with minimum technical intervention. Accordingly, four critical areas have been identified to privatize the rehabilitation and augmentation needs.

- 1. Improvement of the treatment process and enhancement of the production capacity of existing water treatment plants.
- 2. Infilling of the distribution system to expand the service coverage utilizing already available excess production capacities in water treatment plants.
- 3. Reduction of NRW or water losses and save water to provide improved services.
- 4. Identify the areas and provide extensions where immediate revenue generation would be enhanced.

After several rounds of discussions and many site visits, the list of projects has been identified. The government intends that these projects be launched on a short-term basis to bring immediate benefits to the consumers. Hence already, the projects have been formulated, and designs have been commenced. There are over 40 such projects with immediate intervention. In addition to these, the new water supply schemes too have been studied and identified to expand the service coverage. With these objectives, a corporate plan has been developed to identify the projects with the minimum amount of investment would provide a better service and expanded service coverage.

As we stride ahead in this journey, I am confident that the NWSDB and all other involved parties will work together and achieve the goals we have presented for the upcoming years, which are vital for a vision of "Prosperity and Splendour".

Chairman's Message

Nishantha Ranatunga

Chairman National Water Supply & Drainage Board

For a millennium, from 200 BCE to 1200 CE, the island of Lanka possessed one of the most advanced hydraulic civilizations in the world. Our ancestors developed and harnessed a water harvesting and management system consisting of a series of manmade tanks (wewas) connected by spillways and channels. One of the oldest water management systems on record, it transformed an inhospitable terrain into a granary and became the bedrock of a highly developed civilization.

What our ancestors knew more than two millennia ago is accepted as a universal truth today. The health of a nation depends on safe drinking water and proper sanitation. Even in our technologically advanced age, societies cannot survive, economies cannot thrive and civilized life cannot continue, unless these two essential preconditions are met. Today, access to safe during water and sanitation is accepted by the UN as a basic human right.

Ensuring the right to access for pipe borne safe drinking water to all Sri Lankans is a key promise of the "Vistas of Prosperity and Splendor" by His Excellency the President Gotabaya Rajapakse. Accordingly NWSDB is tasked with developing strategies to provide safe drinking water to all the people in Sri Lanka by 2024.

Today, access to safe drinking water and sanitation is accepted by the UN as a basic human right. With this aim in mind, the Honorable Prime Minister Mahinda Rajapakse, obtained cabinet approval to set up an expert committee to develop a common Watershed Management Approach in Sri Lanka. This committee is headed



by Professor C.M.Madduma Bandara, an internationally recognized expert in land and water study.

The NWSDB is also working to develop a comprehensive Business Plan for the next five years. The plan will have two core goals – the satisfaction of existing consumers through improved quality of delivery and the expansion of pipe borne water services to cover all Sri Lankan people. Building on quantity without sacrificing quality is our aim.

A consultative workshop was held in February 2020 at the Treasury auditorium to discuss the proposed business plan. The workshop brought together all the stakeholders, including the Ministry, Department of National Planning (NPD) and Department of External Resources (ERD) officials. The contours and the contents of the business plan were discussed, including the necessary financial studies.

As we move forward, the challenges we face are many and diverse. They range from the increasing incidences of Chronic Kidney Disease (CKD) in parts of the North Central and North Western Provinces to the fact that only 2.5% of the population in selected cities has access to organized piped sewage facilities. Our responses to these challenges include taking measures to purify contaminated water in CKD-affected areas and expanding the sewage system, as a prelude to making safe sanitation a reality for all Sri Lankans.

We have also taken steps to increase the number of water connections via the maximum utilization of existing 331 water supply schemes. We are in the process of identifying those plants where quality and quantity enhancement can be undertaken with minimum intervention and investment. I must make a special mention here of the yeoman work done by the NWSDB staff, under the direction of the Board of Directors, in identifying the most suitable water supply schemes and working to further develop their capacities.

During my short tenure as the Chairman of the NWSDB, I have come to experience and understand the ability and commitment of the staff members of this organization. I'm confident they possess the knowledge, the work-expertise and the dedication to enable our goal of providing safe drinking water and sanitation to all Sri Lankans. I convey my sincere gratitude to every one of them for their hard work and for the cooperation they have accorded me.

My thanks go to the Vice Chairman Mr.N.R.Ranawaka and the Board of Directors, and to the Secretary to our Ministry, Dr.Eng.Priyath Bandu Wickrama.

I express my gratitude to the Irrigation Department and the Mahaweli Authority for the cooperation they have extended to us in fulfilling tasks related to Water management.

Special thanks are due to the Treasury for providing the necessary funding for our work. Our aim is to become self-sufficient financially by 2024, so that we can full fill our public responsibilities without becoming a burden to the public.

Finally I express my gratitude to the Minister of Water Suppl, Hon. Vasudeva Nanayakkara, for his special interest in water and environment management and for encouraging the NWSDB to meet its commitments in a timely and effective manner my thanks also go out to State Minister Hon. Sanath Nishantha for his work in promoting community water schemes in rural areas.

Vice Chairman's Message

N.R. Ranawaka

Vice Chairman National Water Supply & Drainage Board

Providing access to safe drinking water for the entire population of Sri Lanka has been identified amongst the highest priorities of the Government. His Excellency President Gotabaya Rajapaksa and Hon. Prime Minister Mahinda Rajapaksa have assigned responsibility of spear heading this sector, an imperative for economic revival; to the Hon. Vasudewa Nanayakkara whose vision and dedication towards this end has begun to inspire and encourage the NWSDB.

The NWSDB embraces this challenging objective-of drinking water to all in Sri Lanka, not merely as a fulfillment of its mandate but as an opportunity to contribute to wider objectives of social welfare and equity.

Whilst the NWSDB will make an unstinted effort to implement projects to achieve these objectives, it would also make every effort to avoid any financial losses and minimize contractual disputes. Thus, ensuring due diligence in the formulation of contracts documentation and administration, as well as project implementation phases will receive our team's highest attention. And towards this end, I have the highest confidence in the abilities and commitment of staff of NWSDB. The experience they have gathered will be harnessed to ensure stringent application of best practices and due diligence, enabling the country to fulfill the pledge of Drinking Water for all according to the time lines we have established.



General Manager's Message

Thilina Wijethunga

General Manager National Water Supply & Drainage Board



The National Water Supply & Drainage Board (NWSDB) is fully committed and geared to fulfill the aspiration of the Government in providing access to safe drinking water and piped borne water to all citizens of Sri Lanka by 2025. In order to fulfill the pledge given in the "Vistas of Prosperity"; the Government's Vision for drinking water, the NWSDB has developed its Corporate Plan 2020 - 2025 which provides the road map over the next 4 to 5 years. The need for improvement, specially the augmentation and capacity enhancement, of existing 331 water supply projects have been identified after a careful and detailed studies. Also several new water supply projects to extend the coverage to new areas and to meet the domestic and commercial demands have been identified. A special attention has been made to avoid regional disparities and to improve the water service coverage in the lagging regions.

The knowledge and core competence of the NWSDB has been fully harnessed and utilized to provide innovative and out of the box approaches and strategies to achieve Government's stipulated targets for the drinking water sector.

The experience and the technical knowledge of the NWSDB staff have been fully utilized to abstract the maximum benefits from the existing water treatment plants. The nonrevenue water and energy saving projects have been identified and launched. The distribution expansion projects to serve the uncovered areas and to incorporate the mission gaps in the distribution system have been formulated. The expected service coverage and potential for revenue generation have been assessed.

All new projects are planned and designed with in-house technical capacity. The NWSDB has carried out the state of the art designs for the water treatment plants and most of the bidding documents are ready for competitive tender calling.

The commitment and the dedication of the NWSDB staff is at its peak to fulfill the Government aspiration for the drinking water sector. The system and procedure have been revisited, revised and reassessed over the last year to establish a more efficient, effective, productive and sustainable delivery system to achieve the sectorial and organizational goal.

With the Guidance from the Hon. Vasudeva Nanavakkara, Minister of Water Supply, Hon. Sanath Nishantha, State Minister of Rural and Divisional Drinking Water Supply Projects Development the fully committed Secretary, Dr. (Eng.) Privath Bandu Wickrama and far sited Leadership from the Chairman, Mr. Nishantha Ranatunga and Vice Chairman Mr. N.R. Ranawaka and all Members of the Board of Directors, the entire staff of the NWSDB is fully committed and enthusiastic with a very high moral to be the proud partners to ensure the success of the Government's Development Agenda for drinking water sector.

NWSDB, Sri Lanka's national organization responsible for the provision of safe drinking water and sanitation

OUR VISION To bo the most prestigious

To be the most prestigious utility organization in Sri Lanka through technological and service excellence

OUR MISSION

H H. H

Serve the nation by providing sustainable water & sanitation solutions ensuring total user satisfaction

Visit our site www.waterboard.lk

EXISTING SCHEMES AND ONGOING PROJECTS (SERVICE LEVEL IMPROVEMENTS AND SERVICE COVERAGE ENHANCEMENT STRATEGIES)

Augment, Expand and Improve the Efficiency and Productivity of the Existing Schemes to Enhance the Production Capacity, Quality Improvements, Service Coverage and Service Level.

NEW PROJECTS (SERVICE COVERAGE ENHANCEMENT)

Expand the Service Coverage to New Urban, Semi Urban and Rural areas to meet the Domestic, Commercial and Industrial Demand

CORPORATE

TARIFF POLICY AND REVENUE ENHANCEMENT

Ensure the financing of sustainability of operations by improving the revenue through appropriate tariff adjustments and reducing the cost of production and operation (O&M) costs.

DEBT SERVICING AND ADDITIONAL REVENUE GENERATION

Establish the strategies to handle debt servicing commitments and generation of additional revenue utilizing dormant assets to meet the cash flow requirement for debt servicing.

PRODUCTIVITY AND EFFICIENCY IMPROVEMENTS TO THE EXISTING ORGANIZATIONAL STRUCTURE AND FUNCTION

Enhance the productivity and the Efficiency of the existing functional areas of the organizations by introducing effective process and reducing the administration and overhead costs.

ORGANIZATIONAL REFORMS FOR BUSINESS EFFICIENCY

Introduce Organizational Reforms to strengthen the lagging functional areas to strengthen the Business Efficiency and the productivity of the Organization by introducing appropriate structural changes

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Preface

In 2015, the United Nations General Assembly designed and established the Sustainable Development Goals (SDG's) or Global Goals; a collection of 17 interlinked goals designed to be a "blueprint to achieve a better and more sustainable future for all". They are intended to be achieved by the year 2030. Two years later, in 2017, a UN Resolution made these broad goals more actionable with specific targets for each goal. Sri Lanka is amongst the 195 nations that have pledged commitment to these goals which are aimed at addressing a multitude of areas such as poverty, peace and justice, economic growth gender equality and the environment. Goal 6 targets universal and equitable access to Safe Water & Sanitation by 2030.

President Gotabhaya Rajapaksha, in his "Vistas of Prosperity and Splendour" stipulates his objectives for Sri Lanka, to achieve a reduction in poverty, a healthy population, education for all and a clean environment harmonized with the UN SDG's. Sri Lanka has also set itself a target to enable access to clean drinking water to every person in the country by 2025.

Globally, water scarcity affects more than 40% of the world's population, and although 71% of the global population (5.2 Billion people) had safe drinking water in 2015, as many as 844 million people did not have access to even basic drinking water. The threat of dwindling drinking water supplies is common to every continent with an increasing number of countries experiencing water stress; a situation which is further exacerbated by increasing drought conditions and desertification. The world has lost 70% of its natural wetlands over the last century and it is projected that in 2050, at least one in four people will suffer recurring water shortages.

In 2015, 39% of the global population (2.9 Billion people) had safe sanitation. However, 4.5 Billion lacked safely managed sanitation services, with 2.3 Billion lacking even basic sanitation.

Goal 6 of the UN SDG's which targets Clean water and Sanitation also targets improved water quality by reducing pollution, increased water use efficiency, integrated water resource management, protection and restoration of water related eco systems, and strengthening the participation of local communities in improving water and sanitation management.

In Sri Lanka, only 53.7% of the population has access to a pipe borne water supply. It has been identified that the waterways have been polluted, thus compounding the challenge of providing safe drinking water to all as per the Government's Commitment to ensure that 100% of the population is provided with clean and safe, drinking and pipe borne water.

The National Water Supply and Drainage Board (NWDSB), being the primary organization responsible for supplying pipe borne water for the country has taken up this challenge to achieve the Government's vision and meet the UN SDG Number 6.

Sri Lanka's sanitation facilities cover 92% of the population out of which around 2.1% of the population has access to off-site piped sewerage systems. The remaining 90% of the population depends on on-site facilities which principally comprise septic tanks and closed pit latrines.

This booklet presents a summary of an exercise carried out over the past six months, with the involvement of all individuals of the organization including the Chairman and the Board of Directors, the General Manager, Engineers and other staff. The Secretary to the Ministry provided unstinted support to the NWS&DB during this period. The comprehensive study entailed locating unserved populations, identifying suitable water resources, finding appropriate lands to construct water treatment facilities and storage structures and designing water treatment conveyance and distribution systems in order to achieve the Government's Vision and targets. Furthermore, this document also briefly discusses the current status of NWDSB and its plans to achieve Corporate Goals 3 to 6. Corporate Goals 1 and 2 are covered below.

The projects were identified and designed under five main categories as follows :

- 1. Augmentation of the water quality and quantity, of existing water supply systems.
- 2. Infilling distribution systems of already constructed or ongoing large and medium scale projects where the number of pipes included in the original contracts are insufficient to distribute water to the public due to budget constraints.
- 3. Business Efficiency Improvement Projects (NRW reduction & Energy Saving projects) for water & sanitation
- 4. New water supply & sewerage schemes to unserved areas.
- 5. Local Authority or Community based water schemes for areas which would not be covered by categories 1,2 & 4

Categories one to four would be implemented by the NWSDB.

It is unique that the above exercise which has culminated with this Corporate Plan as well as the design and planning of projects have been carried out entirely by local in house expertise. The NWDSB also proposes several new methods in project implementation such as the establishment of standard sized modular treatment systems, rate contracts for pipe supply as well as the empowerment of local manufacturers to develop and supply the required input such as pipes . Considering the multitude of tasks to be completed within a short period of time, the implementation contracts will be divided into several groups to accommodate all levels of local contractors from ICTAD grade CS up to lower levels C3 and C4.

The completion of this project is estimated to increase overall pipe borne water coverage to 79% in year 2025. The remaining 21% will be covered by community water supply schemes and safe point sources (item five). The Community Water Supply Department established under the Ministry of Water Supply will implement projects related to category five. It would also involve providing support to existing communitybased schemes.

In the case of sanitation, piped-sewerage coverage is projected to be increased from 2.1% to 4.4% in year 2030 thereby increasing Sri Lanka's total sanitation coverage; which includes both safely managed and basic onsite sanitation facilities, to 100% in year 2030.

Safe and affordable drinking water for all and improved sanitation facilities, require significantly high investments in infrastructure. An investment of LKR 990 Billion is to be made during 2021 to 2024 in order to realize this unprecedented vision for drinking water supply. Similarly, the total budgetary requirement of LKR 360 Billion is to be invested during 2021 to 2030, in order to expedite the sanitation improvement projects.

Background

National Water Supply and Drainage Board is the national agency for the provision of drinking water to the urban and semi urban areas, and pipe borne sewerage facilities

PRESENT COVERAGE

Today, NWSDB supplies potable water to 40% of the population through the 331 large and small water supply schemes across all 9 provinces in the island, servicing a total of 2.4 million domestic connections. A further 191,000 connections are commercial, industrial and institutional

Most of the potable water supply schemes maintained by the NWSDB have full treatment facilities while only a small number of schemes have partial treatment facilities. The number of public stand posts is gradually declining and has now reached 1,513

The Community Managed Water Supply Schemes and Local Authorities provide water to a further 13.7% of the population. An estimated 38.7% is covered with a basic water supply through self-sufficient methods of protected dug wells, rainwater harvesting systems, and nearby public point sources including hand pumps and dug wells. In the estate sector, 70% of the



population has access to a basic water supply, with a growing percentage gaining access to safely managed, treated water supply

NWSDB also provides water to Community Managed Water Supply Schemes on a bulk supply basis and provides water to the water bowsers operated by local authorities or private parties, to support water-stressed areas. Furthermore, NWSDB has a responsibility, delegated to the Ground Water Section to support the Local Authorities in maintaining hand pump bore holes in rural



areas under the 3-tier maintenance system.

When Sri Lanka's sanitation situation is concerned, coverage is over 92% out of which around 90% of population depends on on-site facilities which principally comprises of septic tanks and closed pit latrines and another 2.1% relies on piped sewerage which are limited to a few main cities and most of those systems are operated and managed by NWSDB.

Organizations involved WASH activities

The main documents which provide policy guidance in the formulation of sector goals are; United Nations Sustainable Development Goals 2015 National Policy Framework - Vistas of Prosperity and Splendor (2019) Public Investment Programme 2017 - 2020 National Physical Plan 2050

Challenges

Climate Change And Water Scarcity

The island of Sri Lanka and the surrounding South Asian region are vulnerable to vagaries of weather such as extended period of drought and in the future, to threats arising from Climate Change. Thus, one of the significant challenges to safe water management faced by the NWSDB is ensuring uninterrupted supply of drinking water during drought periods, These conditions often compel the restriction of supply hours.

Quality of Public Point Sources & Chronic Kidney Disease

One of the most significant concerns with regard to public point sources has been the high content of dissolved solids (hardness) in the water. There is speculation combined with scientific evidence that this high content of hardness could be a cause of Chronic Kidney Disease (CKDu) which continue to afflict several provinces in Sri Lanka. Furthermore, an examination also revealed that open dug wells contain a high number of pathogens and micro oraganisms.

Community Engagement

Community engagement and awareness of best practices in water purification and safe consumption are crucial to mitigate water contamination and preserve clean water as an imperative to ensure the safety and well being of the population.

Inadequate Treatment

Removal of Irons and Fluorides from tube wells for which Iron and Fluoride removal plants have been introduced. However, this method has encountered a number of operational issues which have challenged the sustainability of such solutions.

what needs to be done...



Identification of roles of key sector institutions



Comprehensive coodination mechanisms at the national & provincial level, from uniform policy implementation, expedited decision making and efficient resource utilization



Collective organization and cooperation amongst stakeholders regarding water resource utilization, sharing, conservation and preservation for climate resilience



Engagement of the private sector and relevant research organizations to leverage their mutual strengths to advance innovation in the water business

- Limitations in distribution network
- Limitations in production capacity
- Water Resources stress
- Partial Treatment and Water Quality Deterioration
- Salinity Intrusion
- Boreholes & Tube Wells depletion



Way Forward

The strategic plan of NWSDB sets objectives that will be pursuing during the years from 2020 – 2025. These strategies are in line with the national policies accumulated by the government. NWSDB has been in an inevitable and vulnerable situation regarding its financial attributes during the past years. The NWSDB has not been an organisaton which can generate sufficient budget to cover capital expenditure through their operational income.

With the expectancy to omit all of the perseverance with the government's guidance, the NWSDB has taken up new strategies after delving into research and details. These strategies will lead up to accomplishing the targets as planned if executed correctly. The present decision-makers are very well aware of fighting against complacency and lack of vision if there's anything to be achieved. Everyone concerned at NWSDB is putting all of their efforts with the expectancy of improving the business efficiency; while whittling and revolutionizing the strategies according to the needs of the Sri Lankan citizens. Hopefully, the strategies implemented now will mutate the past mistakes and delve into a new chapter of the institute in the long run.

NWSDB looks forward to achieving its epitome of the objectives by increasing the pipe-borne water supply coverage up to 79% by the year 2025; to make access to water ubiquitous to most of the population. For this NWSDB hoping to have devoted and a prowess cluster of human resources with great capability and talent to maximize the institute's productivity. To sustain this effort, NWSDB has planned to convert the non-revenue water supply into revenue throughout these years by reducing the distribution loss and utilizing the excess producing capacity productively. Moreover, to cover up the institute's loss by cutting down unnecessary costs by maximizing the utilization of the excisting production capacity and enhancing new projects' capacity. These will lead the NWSDB to a financially stable institute within the given period.

NWSDB plans to accelerate its efficiency by incremental proposing and radical improvements in the 2020 - 2025 strategies. If there is an objective that should be accomplished to reach in ten years, the best strategy to make it happen is to think about how it can be managed to reach the same objectives in one year. Hence at a breakneck speed, the NWSDB has implemented "short term" strategies from to "medium-term" to "long-term" in terms of achieving them laterally. NWSDB has defined the objectives and has implemented steps to undertake without losing focus likewise in previous years and receiving constant feedback to review the progress. If it is not up to the planned standard, the management will be making necessary adjustments. "What, How & When will NWSDB elaborate these strategies" are narrated in detail as below;



Short term: Completion of ongoing projects and capacity and quality enhancement of existing water supply schemes



Medium Term: Improvements for utilization of full capacity of existing water supply and sewerage schemes and efficiency improvements



Long Term: Expansion to new service areas through implementation of new projects



Chapter

Service Level Improvement and Service Coverage Enhancement of Existing Water Supply and Sewerage Schemes

CALCULATION OF

1. Service Level Improvement and Service Coverage Enhancement of Existing Water Supply and Sewerage Schemes

1.1 Background

In line with the Government's policy commitment to provide clean and safe drinking water to the entire (100%) population of the country, the National Water Supply & Drainage Board (NWSDB) is focused on the completion of new water supply projects which are presently at construction stages as well as the augmentation of existing water supply schemes to harness their maximum output and improve the quality of the water, with minimum investment.

A majority of the water treatment plants maintained by the NWSDB have treatment facilities which are suitable for the appropriate quality of raw water. However, some treatment plants require improvements to achieve the quality standards for drinking water whilst the capacity of some plants can be significantly increased with some technical intervention. Some water supply schemes also do not function at their full capacity due to factors such as the non-availability of sufficient distribution networks, insufficient carrying capacities of distribution and transmission pipe lines and inefficient pumping systems. In addition, leakages in some pipe networks which result in high volumes of Non-Revenue Water (NRW) cause significant losses to NWSDB.

The existing district wise water supply coverage is given in the table 1.1

Table 1.1 Existing district wise water supply coverage

District	Present Coverage
Western	63.6%
Colombo	92.1%
Kalutara	48.7%
Gampaha	43.8%
NW	11.6%
Kurunagala	8.0%
Puttlam	19.2%
NC	32.6%
Anuradhapura	32.2%
Polonnaruwa	30.0%
Northern	9.6 %
Jaffna	4.1%
Mannar	55.1%
Vavuniya	6.3%
Killinochchi	4.9%
Mullaitivu	6.6%
Central	36.7%
Kandy	52.6%
Nuwara Eliya	9.8%
Matale	28.8%
Southern	43.8%
Galle	35.5%
Matara	41.3%
Hambantota	61.1%
Sabaragamuwa	19.8 %
Ratnapura	17.3%
Kegalle	23.4%
Uva	27.9%
Monaragala	32.3%
Badulla	25.4%
Eastern	60.8%
Trincomalee	70.5%
Ampara	76.9%
Batticaloa	34.6%
Total	40.0%



In addition to the supply of drinking water the NWSDB also holds responsibility for increasing pipe sewer coverage and safe sanitation in the country. Although sewerage pipe networks are available for a few cities in the country, the lack of connectivity in existing sewerage systems affects the sustainability of the scheme.

This Chapter discusses the capacity enhancements and quality improvements of water treatment plants distribution infilling and expansion, efficiency improvements combined with energy saving, NRW reduction in water supply schemes and the increase of the piped sewer coverage by utilizing spare capacity of the existing sewerage treatment plants.

1.2 Strategies for Short and Medium Term Service Level Improvement & Coverage Enhancement

In a backdrop of severe financial constraints faced by the Government and the NWSDB, it is proposed that the island wide drinking water supply and sanitation coverage is augmented under the following plan :.

- (i) Short Term : Completion of ongoing projects and capacity and quality enhancements to existing water supply schemes
- (ii) Medium Term: Improvements to facilitate utilization of full capacity of existing water supply and sewerage schemes and efficiency improvements

1.3 Short Term Strategy: Completion of Ongoing Projects and Capacity & Quality Enhancement of Existing Water Supply Schemes

As a short-term strategy to increase coverage which can ultimately contribute to generating more revenue within a shorter period, the NWSDB expects focus more on completing the 44 ongoing water supply projects (WSP), 03 sewerage projects and the capacity & quality enhancement of existing water supply schemes.

1.3.1 Completion of On-Going Projects

Considering the progress made thus far, on the ongoing projects, they are estimated to be complete as stated in Table 1.2 below. As per the planned schedule, a majority of the ongoing water supply projects (WSP) are expected to be completed by end 2021. The detailed information on these 44 projects, with their anticipated completion dates are tabulated in Annex 1.

Categories	Funding	g Total Number of Projects	No. of Projects to be Completed					
			2020	2021	2022	2023	2024	2025
Large Scale WSP	Foreign	24	6	7	8	1	1	1
Large Scale WSP	Local	11	9	2				
Small & Medium WSP	Local	09	3	6				
Sewerage Projects	Foreign	03		1	1			1
Total number of WSP			18	15	8	1	1	1
Total number of				1	1			1
Sewerage Projects								

Table 1.2: Summary of On Going Projects & Completion Strategy

The total funding required for the timely completion of ongoing projects **is LKR 238 Bn** with a highest annual requirement of **LKR 123 Bn in 2021**. The annual funding requirement is given in Table 1.3 below.

Table 1.3 Funding requirement for completion of ongoing projects

Sector	Budgetary Requirement (LKR Mn.)						
	2021	2022	2023	2024	2025		
Large Scale water Supply Projects (Treasury Borrowed)	66,747	57,206	35,736	15,934	6,950		
Large Scale water Supply Projects (Board Borrowed)	4,244	1,024	50				
Large Scale Sewerage Projects	7,578	14,339	9,927	9,520	1,812		
Water Sector Community Facilitation WSPs	93	-	-				
Development of rural & divisional water supply	1,289	473	-				
Emerging small townships WSPs	4,179	328	228				
Total GOSL	84,130	73,370	45,941	25,454	8,762		
Board Loans	35,326	10,400	300				
Local bank Funds for LBF Projects	3,575	-	-				
Total Investment	123,031	83,770	46,241	25,454	8,762		

1.3.2 Capacity & Quality Enhancement of Existing Water Supply Schemes

Enhancement of the current service by meeting the quantity and quality levels for the existing consumers is a prime responsibility of NWSDB. Accordingly, some water supply schemes require additional treatment units to improve water quality as well as to significantly expand capacity to meet the urgent demand for treated water. The quality and capacity of the existing plants will be enhanced by improving their treatment processes, adding treatment units as needed for quality enhancement and expanding .

A total of 95 schemes, from all 11 Regional Support Centres, (RSC's) which require such enhancments have been identified and are summarized in Table 1.4 and detailed in Annex 2. A total investment of LKR 43.7 Bn is estimated for these improvements while the highest investment is expected to be made in year 2021.

			Budgetary Requirement (LKR Mn.)				
RSC	No. of projects	TCE LKR Mn	2020	2021	2022		
Western Central	2	3884	37	2690	1157		
Western North	8	1744	40	911	793		
Western South	2	391	0	212	179		
North Western	3	892	0	637	255		
North Central	8	4305	188	2336	1780		
North	16	6387	22	2810	3556		
Central	3	1324	217	788	318		
Southern	17	8911	571	5163	3177		
Sabaragamuwa	13	4827	31	2658	2138		
Uva	8	4209	261	2628	1320		
East	15	6820	13	3588	3219		
Total	95	43,693	1,380	24,422	17,891		

Table 1.4: Budgetary requirement for quality & capacity improvement projects (LKR Mn)

The completion of ongoing projects and capacity enhancement of existing water supply schemes, is expected to enable NWDSB to increase its coverage to 54.8%, by providing over 900,000 new connections from 2020 to 2025. Table 1.5 summarizes the number of new connections expected and the resulting increase in coverage, under the short term strategy.

Table 1.5: Expected New Connections and Coverage through Short Terms Strategy

Short Term Strategy	2020	2021	2022	2023	2024	2025
New Connections from On-going projects (cumulative)	55,899	245,573	327,685	439,739	499,739	524,739
Coverage Increase due to on-going projects (cumulative)	1.0%	4.2%	5.6%	7.5%	8.5%	8.8%
New Connections from Capacity & Quality Enhancement (cumulative)			82,088	209,794	212,394	212,394
Coverage Increase due to Capacity & Quality Enhancement (cumulative)			1.41%	3.57%	3.59%	3.57%
Coverage after Short Term Strategy	41.3%	45.8%	49.5%	53.5%	54.5%	54.8%

1.4 Medium Term Strategy: Improvements to Enable Utilization of Full Capacity of Existing Water Supply & Sewerage Schemes and Efficiency Improvements

There are several recently completed water supply projects for which the capital investments have already been made and for which the intakes and treatment plants have been constructed to full capacity. However, due to funding constraints, the distribution networks have only been partially laid. Hence, priority would be given to make investments on these schemes to expand distribution network in order to utilize the full capacities of these water treatment plants. In order to improve business efficiency, projects related to NRW reduction and energy saving would also be addressed under this strategy.

1.4.1. Distribution Infilling & Expansion

This strategy aims to expand distribution for on-going projects and existing water supply schemes by infilling the distribution network. This would enhance the service coverage as well as revenue. A summary of such projects identified covering all provinces are given below in Table 1.6. Accordingly, a total investment of **LKR 42.6 Bn** is estimated for these expansion activities where the highest investment will have to be made in year 2021.

	No of	ТСЕ	Budgetary Requirement (LKR Mn.)				
RSC	projects	LKR Mn	2020	2021	2022	2023	
Western Central	2	1,363	52	517	794		
Western North	9	7,717	43	3,917	3,758		
Western South	1	4,653	0	1,396	2,327	931	
North Western	3	7,054	16	2,266	3,751	1,021	
North Central	5	715	0	551	165		
North	3	684	12	522	150		
Central	5	1,084	0	1,084			
Southern	1	12,859	88	5,056	5,144	2,572	
Sabaragamuwa	3	698	4	694			
Uva	6	1,955	0	1,384	571		
East	6	3,785	0	2,508	1,277		
Total	44	42,568	215	19,894	17,935	4,523	

Table 1.6: Budgetary Requirement for Distribution Infilling & Expansion Projects (LKR Mn)

1.4.2 Efficiency Improvement Projects

It is important to address the efficiency improvements with special focus on reducing cost of production. The efficiency improvement projects identified have been categorized as below:

- (i) Business efficiency improvement through NRW reduction and energy saving projects
- (ii) Enhancement of revenue by providing connection to revenue generating consumer segments

The annual budgetary requirements for efficiency improvement projects in the relevant RSCs are summarized in Table 1.7. A total number of **32** projects from 6 RSCs have been identified requiring an investment of LKR **7.5 Bn** in total.

RSC	No. of	TCE LKR	Budgetary Requirement (LKR Mn.)				
	projects	Mn	2020	2021	2022	2023	
Western South	2	1,166	97	849	221		
North Western	3	232	31	201			
North Central	8	484		431	53		
North	2	239	1	166	72		
Sabaragamuwa	8	317		23	294		
East	9	5,083		851	3059	1,173	
Total	32	7,520	129	2,521	3,699	1,173	

Table 1.7: Budgetary Requirement for Efficiency Improvement Projects (LKR Mn)

The connection and coverage enhancement projects related to distribution infilling, expansion and efficiency improvements of the water supply schemes through NRW reduction and energy saving, are given in Table 1.8. This proposal will yield a coverage increase of 3.83% by adding 227,500 new connections by the end of year 2025. The list of projects identified under these categories are summarized in Annex 3.

Table 1.8: Expected new Domestic Connections & Coverage through medium team strategy.

Medium Term Strategy	2022	2023	2024	2025
New Connections (cumulative)	103,588	209,055	227,455	227,455
Total coverage increases (Cumulative) (%)	1.77%	3.56%	3.85%	3.83%

1.5 The Water Supply Service Coverage Increase from Short Term and Medium-Term strategies

A summary of the forecast service coverage resulting from the short term and medium-term strategies are summarized in Table 1.9. Accordingly, these strategies are predicted to result in a coverage of **58.6**%.

Table 1.9: Coverage Following the Implementation of Projects under Short term & Medium-term Strategies

Strategy	2020	2021	2022	2023	2024	2025
Short Term Strategy:	1.0%	4.2%	7.0%	11.1%	12.1%	12.4%
Coverage Increase due to On-going projects						
& Capacity Enhancements (cumulative)						
Medium Term Strategy:			1.77%	3.56%	3.85%	3.83%
Coverage increase due to Distribution						
Infilling and Business Efficiency						
Improvement projects (cumulative)						
Goal 1: Total Coverage	41.3%	45.8%	51.3%	57.1%	58.3%	58.6%

1.6 Connection Enhancement through Infilling By Utilizing Spare Capacity of Existing Sewerage Schemes

Lack of connectivity in existing sewerage schemes affects the sustainability of these schemes. Accordingly, a project will be designed to enhance piped sewer coverage by 0.21%, by utilizing spare capacity of the existing sewerage schemes. The main objective of this connection enhancement project is to ensure

- that premises which do not have connections despite being located within schemes/zones which have connections receive connections,
- the sustainability of the sewerage schemes and
- that benefits are extended to new users.

This project would add 8,160 sewer connections in the form of direct sewer connections, simplified and conventional sewer extensions and simplified extensions to the existing Dehiwala/Mount Lavinia, Kurunegala, Kataragama, Hikkaduwa and Kolonnawa sewerage schemes. The project will also specify policies and procedures for construction of domestic internal sewer plumbing to enhance the connectivity.

Annual budgetary requirement of three provinces which have existing sewerage schemes with spare capacity which can be utilized for infilling, is summarized in Table 1.10 below. A maximum allocation of LKR 1.8 Bn is required for year 2022 for these infilling works.

Province	No of	ТСЕ	Budgetary Requirement (LKR Mn.)				
	Projects	(LKR Mn.)	2021	2022	2023		
Western	2	2,500	694	718	1088		
North Western	1	997	399	299	300		
Southern	2	1,621	732	398	491		
Total	5	5,118	1825	1415	1879		

Table 1.10: Budgetary Requirement for Infilling by Utilizing Spare Capacity of Existing Schemes

1.7 Business Efficiency and Safe Sanitation Enhancing Projects

To ensure safe sanitation facilities for 90% of the population by 2025; NWDSB, as a short term strategy, proposes the construction of Septage treatment facilities in high demand areas where local authorities are reluctant to do so.

A Decentralized Waste Water Treatment System (DEWATS) will be considered for bridging the gap between conventional and onsite systems. DEWATS is a preferred option for areas with the concentration of population is high with potential high risk of surface and ground water contamination and areas of national economic interest such as high tourism zones.

Accordingly, the city of Ella is considered for DEWATS (2 numbers), considering its population density and risk level for pollution and contamination and the importance to tourism t industry as a key attraction.

In addition, a project for promoting the reuse of water by reclaiming water from wastewater treatment plants for purposes such as industrial processes, environmental restoration, agriculture and irrigation is to be implemented. Water reuse can provide alternatives to existing water supplies and be used to enhance water security, sustainability, and resilience.

Annual budgetary requirement for four provinces for which sewerage projects have been identified under the strategy for enhancement of safe sanitation facilities is summarized in Table 1.11 below. A total allocation of LKR 4.2 Bn is required to carry out the identified business efficiency improvement projects.

Table 1.11 Budgetary Requirement for Business Efficiency and Safe Sanitation Enhancing Projects

Deretari	No of	TCE	Budget Requirement (LKR Bn)				
Province	Projects	(LKR Mn)	2021	2022	2023		
Western	5	1,360	508	752	100		
North Western	1	253	93	160			
Southern	2	507	189	318			
Uva	1	2,110		950	1,160		
Total	9	4,230	790	2,180	1,260		

1.8 Total budgetary requirement and revenue

The total budgetary requirement to implement the short term and medium term projects and the expected revenue are given below.

Fable 1.12 Estimated	project investment ((short and medium term)
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	Total	Bu	Budget Requirement (LKR Bn)			
Category	Investment (LKR Bn)	2021	2022	2023	2024	
Water Supply						
Short Term Strategy						
Completion of On-Going Projects	187.5	76.6	59.0	36.0	15.9	
Capacity & Quality Enhancement of Existing water supply schemes	43.7	25.8	17.9			
Medium Term Strategy						
Improvements for utilization of full capacity of existing water Supply schemes and efficiency improvements	50.1	22.8	21.6	5.7		
Accelerated Island-wide NRW reduction project	21.4	5.8	7.8	7.8		
Total – Water Supply	302.7	131.0	106.3	49.5	15.9	
Sewerage						
Completion of On-going Projects	41.3	7.6	14.3	9.9	9.5	
Projects under Medium Term Strategy	9.4	2.6	3.6	3.2		
Total - Sewerage	50.7	10.2	17.9	13.1	9.5	

	2021	2022	2023	2024	2025
Total No . of New Connections	301,762	365,943	390,693	103,162	40,623
Cumulative No. of Water Supply Connections (Mn)	2.9	3.2	3.6	3.7	3.8
Total Bill Revenue from New Connections (LKR Bn)	3.0	6.4	10.1	10.8	11.2
Total Connection Charges from New Connections (LKR Bn)	6.6	7.2	6.6	1.8	0.9
Revenue from New Connections (LKR Bn)	9.6	13.6	16.7	12.6	12.1
Existing Billing Revenue (2020) (LKR Bn)	24.7	24.7	24.7	24.7	24.7
Expected Annual Revenue (LKR Bn)	34.3	38.3	41.4	37.3	36.8

Table 1.13 Expected revenue generation from short and medium term projects




New Projects (Service Coverage Enhancement)



2. New Projects (Service Coverage Enhancement)

2.1 Background

Chapter 2 presents the plans for expansion of coverage to new service areas through the implementation of new projects.

The NWSDB, with the assistance of Water Supply & Sanitation Improvement Project (WaSSIP) which was funded by the World Bank, began the preparation of a Comprehensive Strategic Investment Programme for the Water Supply and Sanitation Sector in early 2019. The Programme's plans cover the entire country and presents a a plan for investments up to 2025 and 2030, and a water resources needs assessment horizon of 2050. It also identified funding investments in rural and estate water supply and sanitation The plan will function as a master plan for the NWSDB for 2025 and 2030 for its investments in the urban and semi-urban areas.

The methodology of the study was based on a review of available, approved development plans and policy guidelines and demand projections for 2025, 2030 and 2050. The demand data developed was used to calculate the requirements in water resources and treatment capacity for water supply, sewage and septage for relevant sectors and subsectors. Following this comprehensive study, new water supply & sewerage projects for implementation have been identified to ensure availability and sustainable management, of water and sanitation for all across the country.

Accordingly, these new projects identified have been prioritized based on the priority criteria approved by the National Planning Department (NPD) and are discussed in this chapter with their total budgetary requirements to achieve the anticipated coverage targets.

2.2 Implementation of New Projects

The new projects have been aligned with achieving the objective of reducing the island's regional disparities in water supply coverage . Based on the priority criteria approved by the National Planning Department (NPD), two lists of projects have been prepared. List one summarises projects to be implemented during 2021-2025 and list two gives projects to be implemented beyond 2025. Both lists are prioritized based on the regional priority, readiness, availability of water sources and, lands etc. The projects to be implemented during the period 2021-2025 (Annex 4) and the projects to be implemented beyond 2025 (Annex 5) to achieve the set targets in 2030. The projects identified for implementation during year 2021-2025 have also been separated as Batch 1 and Batch 2, with Batch 1 scheduled to be implemented in year 2021 and Batch 2 scheduled for implementation in year 2022 and 2023.

Some large scale sewerage projects (listed in Annex 6) are scheduled to be implemented to achieve the expected pipe sewer coverage targets of 3.0% and 4.4% in year 2025 and 2030, respectively.

Table 2.1 Provides a summary of new projects scheduled for implementation during 2021-2025.

Province / RSC	District	Projects (Nos.)	Households Benefitted (Nos.)	Covered Areas		
Western Central	Colombo	6	200,000	Awissawella, Kotte, Kolonnawa, Maharagama, Battaramulla		
Western North	Gampaha	6	160,100	Mirigama, Divulapitiya, Kelaniya, Kiridiwela, Gampaha, Attanagalla, Minuwangoda		
Western South	Kaluthara	4	94,100	Ingiriya, Hadapangoda, Kaluthara		
North Western	Kurunegala	5	187,425	Kurunegala, Katupotha, Bamunakotuww, Panduwasnuwara, Bingirya, Udubaddawa, Makadura,Pannala, Kuliyapitiya, Melsiripura, Galgamuwa, Ehatuwewa, Ambanpola		
	Puttalam	5	89,500	Dankotuwa, Chilaw, Puttalam, Rasnayakapura, Kalpitiya		
North	Anuradhapur a	2	53,800	Nuwaragam Palatha East, Nuwaragam Palatha Central, Mihintale, Thirappane, Palugaswewa, Kekirawa, Hingurakgoda		
Central	Polonnaruwa	1	68,000	Welikanda, Dimbulagala, Thamankaduwa, Lankapura, Higurakgoda, Elehera		
North	Jaffna	4	3,150	Chunnakam, Kankesanthurai, Chulipurm, Point Pedro		
	Kilinochchi	1	33,480	Kilinochchi		
	Kandy	9	152,280	Kundasale,Haragama, Delthota, Medadumbara Panwila, Hasalaka, Hatharaliyadda, Nawalapitiya Pallegama, Pupuressa Atabage, Ganga Ihala Korale, Kothmale		
Central	Mathale	2	51,430	Galewela, Pallepola, Matale, Matale, Yatawatta, Naula,Rattota Amban Ganga Korale,Dambulla		
	Nuwara Eliya	3	20,100	Nuwara Eliya, Kothmale,Nanuoya, Hapugasthalawa, Pundaluoya		
	Galle	3	82,470	Galle, Baddegama, Imaduwa		
Southern	Hambanthota	4	45,590	Lunugamwera, Kataragama, Middeniya		
	Mathara	5	67,860	Hakmnana, Deniyaya, Morawaka, Mathara, Deyyandara-Mulatiyana		
Sabaragamu wa	Rathnapura	9	105,750	Kiriella, Embilipitiya, Balangoda, Eheliyagoda, Doloswala, Nivithigala, Karavita, Dehiowita, Kuruvita, Kalawana, Ratnapura		
	Kegalle	3	55,200	Warakapola, Rambukkana, Kegalle		
Uva	Badulla	9	51,700	Bandarawela, Loggaloya, Gawarammana Bogahakumbura, Yahalarawa, Ulhitiya, Thaldena Meegahakiula, Welimada, Haldummulla,		
	Monaragala	6	72,000	Badalkumbura, Bibila Medagama, Hambegamuwa, Wellawaya, Thanamalvila Sevanagala, Monaragala,		
	Ampara	2	3,550	Dehiyaththakandiya, Lahugala		
Fast	Baticaloa	1	19,125	Valachchanai		
Last	Trincomalee	3	43,350	Morawewa & Gomarankadawala, Trincomalee, Muthur East areas		
TOTAL		93	1,659,960			

Table 2.1 Summary of new projects

2.3 Project Investment & Outcome

The overall investment and revenue for new projects for the period 2021 to 2024 and targeted for completion within 2021-2024 is summarized in Table 2.2 below.

Completion of new sewerage projects need investment beyond 2024 as well.

Table 2.2: Project Investment and Outcome (new projects)

Cotogomy	Total Investment	Budget Requirement (LKR Bn)					
Category	(LKR Bn)	2021	2022	2023	2024		
Water Supply							
New Projects (2021-2025)							
Projects to be started in 2021 – Batch 1	380.0	114.0	190.0	76.0			
Projects to be started in 2022 & 2023 – Batch 2	299.6		58.2	118.2	123.2		
Large scale RWS (WaSSIP 2) projects	7.6	0.5	2.1	2.9	2.1		
Total – Water Supply	687.2	114.5	250.3	197.1	125.3		
Sewerage							
New Sewerage Projects	309.3	4.6	13.9	32.5	48.5		

The estimates of Revenue to be generated from the completion of proposed projects under three strategies, are presented in Table 2.3 below.

Table 2.3: Expected Revenue Generation Upon the Completion of Proposed Projects

	2023	2024	2025
Total No . of New Connections	171,468	562,602	570,186
Cumulative No. of Water Supply Connections (Mn)	2.7	3.3	3.9
Total Bill Revenue from New Connections (LKR Bn)	1.5	6.7	11.9
Total Connection Charges from New Connections (LKR Bn)	2.3	7.5	8.5
Revenue from New Connections (LKR Bn)	3.8	14.2	20.4
Existing Billing Revenue (2020)(LKR Bn)	24.7	24.7	24.7
Expected Annual Revenue (LKR Bn)	28.5	38.9	45.1

2.4 Desired Water Supply & Sanitation Coverage in the Sector

As per the Government's policy declaration in "Vistas of Prosperity & Splendour", all citizens of the country shall have access to clean drinking water at any given time of day. Based on the above vision, and in its role as the chief implementer of action towards this Vision, the NWSDB has introduced several strategies (as discussed in this Chapter and the previous Chapter) to make extremely efficient investments harnessing local resources and expertise.

Table 2.4 summarizes the projections for water supply and sanitation coverage under the three recommended strategies for service level and coverage enhancements. District-wise water supply coverage from new projects are given in Table 2.5.

Water Supply Coverage				
Year		2019	2020	2025
Coverage with Ongoing Projects & Augmentation, Distri Infilling & Energy Saving Projects	bution	39.0%	41.3%	58.6%
Coverage Increase by New Projects				20.2%
NWSDB Total		39.0%	41.3%	78.8%
CBO/LA & other safe water sources	13.7%	13.3%	21.2%	
Total Piped WS	52.7%	54.6%	100%	
Sanitation Coverage				
Year	2019	2020	2025	2030
Year Sewerage	2019 2.1%	2020 2.1%	2025 3.0%	2030 4.4%
Year Sewerage Household (on-site)	2019 2.1% 89.8%	2020 2.1% 91.5%	2025 3.0% 94.3%	2030 4.4% 95.6%
Year Sewerage Household (on-site) Coverage Total	2019 2.1% 89.8% 92.1%	2020 2.1% 91.5% 93.6%	2025 3.0% 94.3% 97.3%	2030 4.4% 95.6% 100%
Year Sewerage Household (on-site) Coverage Total Unserved	2019 2.1% 89.8% 92.1% 7.9%	2020 2.1% 91.5% 93.6% 6.4%	2025 3.0% 94.3% 97.3% 2.7%	2030 4.4% 95.6% 100% 0%

Table 2.4 : Water Supply & Sanitation Coverage

Note: Increase in coverage of short term, medium term and long term projects are shown in the table.

The estimated district wise service coverage during 2021-2025 following the completion of proposed projects under short term, medium term and long term strategies are shown in Table 2.5 below.

Province/ District	2020	2021	2022	2023	2024	2025
Western	64.0%	69.4%	73.4%	79.3%	86.0%	91.8%
Colombo	92.8%	95.2%	96.5%	98.5%	98.8%	99.0%
Kalutara	49.4%	57.0%	64.8%	69.4%	81.3%	88.9%
Gampaha	44.1%	51.7%	56.5%	67.1%	77.7%	88.3%
NW	11.9%	17.6%	23.9%	33.7%	50.3%	65.8%
Kurunagala	8.2%	15.4%	21.6%	32.0%	47.5%	62.8%
Puttlam	19.6%	22.4%	28.6%	37.4%	56.2%	72.1%
NC	34.0%	39.8%	47.8%	58.2%	66.2%	80.3%
Anuradhapura	35.7%	40.5%	49.1%	59.4%	61.8%	73.4%
Polonnaruwa	30.2%	38.4%	45.0%	55.5%	75.7%	95.5%
Northern	14.6%	19.1%	24.4%	34.8%	57.4%	59.6%
Jaffna	4.7%	5.5%	9.8%	13.1%	54.2%	54.8%
Mannar	56.0%	66.9%	68.7%	82.7%	81.6%	80.6%
Vavuniya	10.1%	13.5%	19.0%	34.0%	33.7%	33.4%
Killinochchi	12.6%	18.5%	30.3%	64.8%	72.9%	89.7%
Mullaitivu	39.8%	59.4%	64.8%	69.8%	74.8%	74.4%
Central	37.5%	42.6%	48.7%	59.2%	68.4%	75.7%
Kandy	53.5%	54.2%	61.4%	78.0%	87.7%	96.4%
Nuwara Eliya	10.2%	11.0%	12.1%	13.5%	17.9%	22.2%
Matale	29.8%	52.8%	62.3%	68.4%	82.5%	90.1%
Southern	44.1%	45.7%	51.1%	64.4%	74.6%	84.6%
Galle	36.1%	37.2%	39.1%	48.8%	59.2%	69.6%
Matara	41.4%	42.5%	47.3%	69.8%	83.9%	97.8%
Hambantota	61.3%	64.7%	76.6%	84.3%	88.8%	93.3%
Sabaragamuwa	23.5%	27.4%	35.1%	39.5%	51.3%	64.2%
Ratnapura	20.5%	25.1%	31.4%	35.8%	47.9%	61.9%
Kegalle	27.7%	30.5%	40.2%	44.5%	55.9%	67.2%
Uva	30.9%	34.7%	40.7%	51.1%	61.3%	74.8%
Monaragala	37.8%	43.2%	50.0%	64.7%	73.3%	91.2%
Badulla	26.8%	29.8%	35.3%	43.2%	54.3%	65.2%
Eastern	62.0%	65.5%	69.4%	74.9%	78.5%	81.4%
Trincomalee	70.9%	70.9%	75.7%	83.0%	88.6%	92.4%
Ampara	78.7%	85.7%	89.1%	94.6%	94.7%	94.5%
Batticaloa	35.6%	37.3%	41.0%	45.1%	51.4%	57.5%
Total	41.3%	45.8%	51.3%	59.8%	69.7%	78.8%

Table 2.5: District wise Water Supply Coverage







Debt Servicing and Additional Revenue Generation

3. Debt Servicing and Additional Revenue Generation

CORPORATE GOAL 3 - Establish strategies to meet debt servicing commitments and generate additional revenue by harnessing underutilized assets and enhancing existing systems to meet the cash flow requirements for debt servicing.



Corporate Goal 3

3.1 Overview

As a service organization, the National Water Supply and Drainage Board (NWSDB) makes significant investments in assets continuously, despite its low revenue streams. These assets are often funded by government grants and loans. For instance, total investment in assets in 2019 amounted to LKR. 537 Bn while total income for the period was reported at LKR. 28 Bn with a resulting marginal net loss of LKR. 1 Bn. Further, available loan balance at the end of 2019 was LKR. 159 Bn. Hence, an additional cash flow of approximately LKR. 22 Bn is required for each of the ensuing years in order to meet the interest and capital repayments. Servicing debt obligations would hence cannot be met from existing revenue streams.

As a strategy to mitigate the ongoing debt burden, NWSDB has initiated accelerated project schemes with Medium term time horizons, at a total cost of nearly LKR. 1 Tn. Capital infusion for this project is expected come in the form of government grants. the program is expected to double the number of water connections to 5 Mn by year 2025. Accordingly, Revenue in the year 2025 is projected to double to LKR.57 Bn from LKR.28 Bn in 2019.

Furthermore, supported by well controlled budgetary mechanisms NWDSB also expects a profit of around LKR. 12 Bn by end 2025.

However, the above strategy alone would not suffice to meet the existing debt burden. Accordingly, the NWDSB continues to hold discussions with the General Treasury to meet the debt servicing gap. Funding assistance of LKR. 15 Bn and LKR. 21 Bn for the year 2020 and 2021, respectively have thus far been agreed on by the treasury and similar funding assistance is expected until 2025, when operational cash flows would become sufficient to meet financial obligations.

3.2 Past and Future Financial Scenarios

This section explains the projected financial scenarios and cash flows statements generated thereon.

3.2.1 Estimated Project Investment 2021 - 2024

Overall estimated investment from 2021 to 2024 for completion of service level improvement and service coverage enhancement of existing water supply and sewerage schemes and new projects proposed to complete within 2021 2024 period is summarised in table 3.1 below.

Completion of ongoing projects and new sewerage projects need investments beyond 2024 as well.

	Total	В	udget Requi	rement (LKR	Bn)
Category	Investment (LKR Bn)	2021	2022	2023	2024
Water Supply					
Short Term Strategy					
Completion of On-Going Projects	187.5	76.6	59.0	36.0	15.9
Capacity & Quality Enhancement of Existing water supply schemes	43.7	25.8	17.9		
Medium Term Strategy					
Improvements for utilization of full capacity of existing water Supply schemes and efficiency improvements	50.1	22.8	21.6	5.7	
Accelerated Island-wide NRW reduction project	21.4	5.8	7.8	7.8	
New Projects (2021-2025)					
Projects to be started in 2021 – Batch 1	380.0	114.0	190.0	76.0	
Projects to be started in 2022 & 2023 – Batch 2	299.6		58.2	118.2	123.2
Large scale RWS (WaSSIP 2) projects	7.6	0.5	2.1	2.9	2.1
Total – Water Supply	989.9	245.5	356.6	246.6	141.2
Sewerage					
Completion of On-going Projects	41.3	7.6	14.3	9.9	9.5
Projects under Medium Term Strategy	9.4	2.6	3.6	3.2	
New Projects	309.3	4.6	13.9	32.5	48.5
Total - Sewerage	360.0	14.8	31.8	45.6	58.0

Table 3.1 Estimated overall project investment (2021-2024)

3.2.2 Revenue Generation

The expected revenue generation with the completion of new projects under the three strategies are shown in table 3.2.

	2021	2022	2023	2024	2025
Total No . of New Connections	301,762	365,943	562,161	665,763	610,808
Cumulative No. of Water Supply Connections (Mn)	2.9	3.2	3.8	4.5	5.1
Total Bill Revenue from New Connections (LKR Bn)	3.0	6.4	11.6	17.5	23.1
Total Connection Charges from New Connections (LKR Bn)	6.6	7.1	8.9	9.3	9.4
Revenue from New Connections under three strategies (LKR Bn)	9.6	13.5	20.5	26.8	32.5
Existing Billing Revenue (2020)(LKR Bn)	24.7	24.7	24.7	24.7	24.7
Expected Annual Revenue (LKR Bn)	34.3	38.2	45.2	51.5	57.2

Table 3.2 Expected revenue generation with the completion of all projects

Financial Scenarios

The financial scenarios presented below depict the actual financial performance from years 2016 to 2019 and the projected financial scenarios from 2020 to 2025. Actual statements of income was presented in management reporting format. Since the treasury is considering financing of these projects by treasury funds, the loan repayment involved with capital investment is not taken into consideration in the financial scenarios.

Projected financial information was derived by incorporating a series of assumptions/judgments and projection is based on year 2019. The assumptions include that cost drivers would mainly be based on the number of connections and a constant depreciation level would be maintained over the projected period. Impact of inflation and past trends have been incorporated where relevant.

Financial Ro	esults									Rs Mn
		Past	Results				Future	e Projectio	ons	
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Income	26,299	26,742	27,443	28,792	30,846	34,258	38,166	45,232	51,517	57,152
		1.68%	2.62%	4.92%	7.13%	11.06%	11.41%	18.51%	13.90%	10.94%
Total Salary Cost	11,644	11,954	13,390	14,004	14,352	16,193	16,676	17,301	19,643	20,298
CUST		2.66%	12.02%	4.58%	2.49%	12.82%	2.99%	3.75%	13.54%	3.34%
Total Utility Cost	3,976	4,224	4,410	4,642	4,997	5,479	6,028	6,807	7,513	8,209
		6.24%	4.41%	5.27%	7.63%	9.66%	10.02%	12.91%	10.38%	9.27%
Total Chemical Cost	904	902	945	1,388	1,537	1,776	2,064	2,508	2,944	3,405
Chemical Cost		-0.23%	4.77%	46.80%	10.76%	15.56%	16.18%	21.53%	17.38%	15.66%
Repairs and Maintenance	1,229	1,336	1,437	1,928	2,071	2,266	2,488	2,876	3,210	3,567
		8.72%	7.55%	34.19%	7.41%	9.44%	9.80%	15.58%	11.63%	11.12%
Total Fatabliaharaat	2,173	2,334	2,646	2,685	2,835	3,017	3,216	3,469	3,708	3,941
Cost		7.43%	13.34%	1.48%	5.60%	6.42%	6.59%	7.88%	6.87%	6.29%
Depreciation	3,988	4,254	4,906	5,321	5,326	5,333	5,340	5,349	5,355	5,361
& Others		6.69%	15.31%	8.47%	0.11%	0.13%	0.12%	0.18%	0.11%	0.10%
Total Cast	23,913	25,004	27,734	29,968	31,119	34,065	35,813	38,311	42,374	44,782
i otar Cost		4.56%	10.92%	8.05%	3.84%	9.47%	5.13%	6.98%	10.61%	5.68%
Profit	2,385	1,737	(291)	(1,176)	(273)	193	2,353	6,921	9,143	12,370
		(27.17%)	116.78%	(303.58%)	(76.82%)	(170.78%)	1119.35%	194.09%	32.11%	35.29%

Table 3.3 Income Statement Outlook

Cash Flows

Cash flow statements for the period 2016 to 2019 were prepared based on historical information whilst those for 2020 to 2025 were prepared based on projected financial results. Once accelerated projects are adopted and implemented as planned and projected, , even with the government assistance of LKR. 36 Bn towards loan repayments; closing cumulative cash balance before working capital and investment could still remain unfavourable at LKRs. 42 Bn by the year 2025;

Loan Repayment

The table below shows the anticipated loan repayment with respect to ongoing local and foreign funded projects.

Year	2020	2021	2022	2023	2024	2025
Local bank funded						
projects (LKR Mn)	9,714	9,091	10,613	9,847	9,081	9,669
Foreign funded						
projects (LKR Mn)	11,291	12,538	12,346	11,818	11,236	10,638
Total (LKR Mn)	21,006	21,629	22,959	21,665	20,318	20,308

Table 3.4 Loan repayment of ongoing local and foreign funded projects

Table 3.5 Cash flow Outlook

Cash flows (CFs) (Before Working Capital and Investments- WC/I)												
		Past R	esults			Future Projections						
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025		
Profit	2,385	1,737	(291)	(1,176)	(273)	193	2,353	6,921	9,143	12,370		
Add : Depreciation	2,724	3,340	3,652	4,615	4,620	4,626	4,631	4,640	4,645	4,649		
Net Operating CFs	5,109	5,077	3,361	3,438	4,347	4,819	6,985	11,561	13,788	17,019		
Less : Loan Repayments	(1,671)	(5,790)	(9,341)	(12,945)	(21,006)	(21,629)	(22,959)	(21,665)	(20,318)	(20,308)		
Add : Govt. Loan Assi on Loans	istance				15,000	21,629						
Net Cash Flow with Loan Repayments	3,438	(713)	(5,980)	(9,507)	(1,659)	4,819	(15,975)	(10,105)	(6,530)	(3,289)		
Opening Cash Balance	3,321	6,759	6,046	66	(9,441)	(11,100)	(6,281)	(22,256)	(32,360)	(38,890)		
Closing Cumulative Cash Balance Before WC/I CFs	6,759	6,046	66	(9,441)	(11,100)	(6,281)	(22,256)	(32,360)	(38,890)	(42,179)		



Figure 3.1 Projected Revenue / Profit/ Cost Behaviour under new programme

3.3 Present Business Overview

The ensuing sections focus on the spectrum of core business activities and performance related to Debt Service and Revenue Enhancement during the period 2016-2019. Relevant Annual Reports and the Audited Financial Statements for the period 2012 – 2018 and the Financial Statements for the year 2019 approved by the Board of Directors were used in this analysis.

3.4 Debt Analysis

As per the capital investment policy of the NWSDB, its capital projects were funded by the assistance provided by the General Treasury which has obtained funds as soft loans with longer grace periods and low interest rates; to develop Sri Lanka's water sector. The NWSDB was thus, privileged to manage and use these soft loans to invest on new mega capital projects.

Following a policy decision taken by the General Treasury in 2014, all soft loans payable by the NWSDB were converted to equity in 2015. The objective of this decision was to strengthen the Financial Position Statement of NWDSB and thus enable it to obtain loans from commercial banks at commercial interest rates.

Upon an analyses of the Financial Position of the NWSDB, commercial banks also requested a Guarantee from the General Treasury as the NWDSB's Revenue was only sufficient to meet its operational expenses. Additionally, the fact that its asset base consists of water tanks and distribution lines which cannot be used as collateral to recover loans in case of need, also contributed to the request for a treasury Guarantee. The following graph indicates the trend of the debt position.





The loans obtained on a commercial basis comprise shorter grace periods as well as high interest rates. For example, the interest rates are fixed at AWPLR + 2.25%. Furthermore the foreign loans are to be repaid in foreign currency. The exchange rate and depreciation of the Rupee is hence an additional burden on debt repayment and interest payment. The graph below depicts the trend of the Sri Lankan rupee vis a vis the US Dollar during the period 2012 to 2019.



Figure 3.3 Trend US\$ to LKR

3.5 Debt Servicing

Until the year 2020, NWSDB has taken efforts to repay the due amounts of loan repayments bi-annually using operational cash flows. However, with the increasing debt burden and the prevailing financial position of the organisation, NWSDB found it is not possible continue the loan repayments in the absence of expected tariff revisions. Several rounds of discussions were had with the treasury regarding the loan repayments of NWSDB.

The treasury is considering in principal to convert the outstanding loan balance to government equity or grants.

3.6 Additional Revenue Generation

The NWSDB is planning to embark on new ventures to generate additional revenue in order to meet the financial gap.

Establishment of a water excellence center which could harness the knowledge of qualified experts in various disciplines within the organisation to develop research and development as well as to cater for the training needs of local as well as international individuals or organisations is one such endeavor.

The well-equipped laboratory network belong to NWSDB is another area where we can use for commercial engagements such as water quality testing, surveillance requirements of water sector organisations and general public.

Forming a subsidiary company under NWSDB is being considered by the Board of Directors which could support the generation of much needed additional revenue to the organisation. This will enable the organisation to engage in business ventures such as production of necessary equipment, pipes and accessories, appurtenance, related to water supply industry covering local as well as export markets. Also, the NWSDB inhouse expertise can be utilized to local as well as international consultancy/ construction projects of water sector. Chapter 5 discusses related organizational reforms in detail.



Chapter 4

Tariff Policy and Revenue Enhancement



4. Tariff Policy and Revenue Enhancement

Corporate Goal 4 - Ensure the financing of sustainability of operations by improving the revenue through appropriate tariff adjustments and reducing the cost of production and operation (O&M) costs.

Objective I	Rationalize the cross subsidy from commercial and industrial sector to domestic sector to ensure equitable balance between the revenue collection from commercial and domestic sector.
Objective II	Identify and profile the consumers in the domestic segment to allocate the subsidy only to the needy. Poor segment limited to the life line requirement.
Objective III	Gradually reduce the subsidy extended to all domestic consumers in general for lower tariff blocks. It should be taken into account where the consumers stand financial-wise
Objective IV	Introduce scheme specific tariff to the dedicated services provided to industrial zones and commercial hubs.
Objective V	Minimize the bulk supply to CBO and rationalize at the bulk supply rate
Objective VI	Simplify the connection procedure and payment procedure to enhance the number of connections

4.1 Background

Water tariffs on average are revised by 30%, every three years. The present tariffs came into effect in 2012 and although revisions were expected in 2015 and in 2018 the revisions did not take owing to the Government's refusal to approve an increase. The tariff was in fact reduced by 10% in December 2014, exerting severe burden on the NWSDB's coffers.

4.2 Water and Sewerage Services Coverage and Income

The following graphs present the growth of water supply and piped sewerage connections and coverage, growth of treated water and sewerage treatment capacity for the period 2016 -2019.







Figure 4.1 Number of new connections per year

4.2.2 Sewerage Coverage and Number of Connections





Figure 4.3 Number of connections per year





Figure 4.5 Annual water production growth



Figure 4.4 Sewerage connection growth











Figure 4.8 Comparison of annual billing & collection



Figure 4.9 Comparison of collection efficiency

4.2.6 Monthly consumption and Billing



Figure 4.10 Arrears position



Figure 4.11 Average household monthly consumption





4.2.5 Collection



Table and charts below present an analysis of water consumed and Revenue generated from the different categories of consumers. Domestic consumers have used almost 73% of the water sold while contributing 61% of to total Revenue generated through water sales. These factors are considered critically in the tariff revision and business planning proposed in the following sections.

Consumar Catagory	Quantit	y Sold	Revenue		
	cu.m '000s	%	Rs. Million	%	
Direct Billing	410,628	73.04	16,721	60.99	
Schools	6,320	1.12	148	0.54	
Tenement Garden	2,181	0.39	89	0.32	
Public Stand-post supply	455	0.08	7	0.03	
Government Institute, NWSDB premises	35,994	6.40	2,542	9.27	
Commercial and Industrial	63,107	11.23	6,313	23.03	
Tourist Hotel	3,321	0.59	314	1.15	
Shipping	120	0.02	67	0.24	
Board of Investment	9,574	1.70	680	2.48	
Religious premises	7,206	1.28	153	0.56	
Sub Total	538,906	95.86	27,034	98.61	
Bulk Billing	19,421	3.46	362	1.32	
Others	3,861	0.69	19	0.07	
Grand Total	562,188	100.00	27,415	100.00	

Table 1: Quantity of water sold and revenue by consumer categories (2019)







Almost 91% of domestic consumers consume less than 30 units per month; whereas 67% of production is supplied to domestic consumers at a subsidized rate which is less than the cost of production. Thus, higher the number of domestic connections given; higher would be the likelihood of Revenue losses.

Water Consumption

Average consumption and production costs based on historical data is presented below. The average water consumption by domestic consumers differs throughout the country, with the island-wide average at 15 cu.m. per month, compared with 17 cu.m per month in the Western province and 13 cu.m. per month in other provinces.

Figure 4.1 shows the monthly bill vs production cost for each category explained above and the bill for consumers who have zero consumption.



Figure 4.15: Monthly bill vs Production Cost for domestic users

Domestic & Commercial Cross Subsidy

Historically, the low tariff block has been maintained at a subsidized rate which is lower than production costs purely in favour of social welfare and it has been made possible over the last few decades by the following factors:

- i. the cross-subsidy from the non-domestic consumers who pay a unit rate higher than the production cost.
- ii. as the tariff seeks to recover only the production and maintenance costs (O&M)
- iii. a majour part of the capital investment has been undertaken by the Government and the
- iv. welfare and political considerations of successive Governments.

A key anomaly, in this heavily subsidized water tariff, is that it is commonly applied to all domestic consumers in general with no consideration of the degree of affordability and willingness of the consumer to pay. In other words, people with different income levels all enjoy a heavily subsidized domestic tariff, regardless of their affordability and willingness to pay. In addition, providing an overall subsidy to all domestic consumers regardless of their affordability to pay; has now become a contentious issue.

Samurdhi benefits have been specifically targeted and offered a subsidy for a lifeline for drinking water need. The quantity thus provided each month is below 12 cu.m. A survey carried out in 2009 by the USAID has revealed that the marginalized poor too are willing to

pay up to Rs. 300 per month. In addition, a recent survey carried out by the UNDP, reveals that most rural and disadvantaged populations spend around Rs. 800 on average; for alternative sources of water such as rainwater harvesting and RO Plants.

4.3 Historical Tariff Adjustments

The domestically subsidized, low water tariff has been subject to misconception and adverse propaganda; and now become a serious threat to the capital investment and the financial sustainability of the NWSDB. When compared to other alternative sources such as hand pumps, bower supply, and bottled water; the pipe borne water supply is unrealistically cheap. Also, when compared to Community Based Organizations (CBOs) where water quality issues are prevalent the NWSDB; domestic tariff is comparatively low.

Figure 4.16 shows the increase in the monthly bill of each consumer category, discussed in 4.1 with the successive tariff revisions.



Figure 4.16 Historical tariff changes

Note : In 2005,2009,2012 low consumption unit (1-10) charges have been increased

The Commercial and high-end domestic tariff cannot be further increased as a further increase will lead to loss of consumers and a high degree of tariff distortion. The only option available is to rationalize the low-end domestic tariff by making the tariff blocks cost-reflective. However, over the last few decades, the attempts to increase and rationalize the lower domestic tariff blocks; have met with strong sociall and politica resistance.

4.4 International Best Practices for Tariff Setting

Water tariff structures and levels vary widely across countries, cities, and sometimes between user categories (residential, commercial, industrial, or public buildings). Stipulation of tariff is based on several formal criteria defined by law, as well as informal criteria. Formal criteria include:

- financial criteria
- economic criteria
- environmental criteria

Social and political considerations also often come into play in setting tariffs.

Different tariff models are used by different countries. NWSDB uses a linear volumetric tariff with a fixed charge.

4.5 Simplification of Tariff Structure to Mitigate Complexity and Improve Transparency

It has been observed that the existing tariff structure is very complicated due to its many categories and multiple blocks within each tariff category. This makes calculations very complex and consumers cannot easily understand how their monthly bill is calculated. Thus, a simple and transparent tariff structure will can be easily understood by both parties, will enable NWSDB to build positive relationships with the consumers as well as maintain equity.

The NWDSB suggests an appropriate fixed charge, with the first 10 units at zero charge and subsequent tariff blocks to be 10 m³.

4.6 Strategies to Manage Cash flows without an Increase in Tariff

In the context of rising costs of energy and chemicals and other related costs, increasing the water tariff has become a necessity inorder to remain sustainable.

At the same time, the NWSDB has initiated several alternate measures. These include initiatives to reduce cost of production by increasing business efficiency, enhancing revenue by increasing the number of connections, and implementation of a number of reforms which are explained in the next two chapters. These measures are expected to enable the NWSDB to manage its cash flows without passing an undue burden to consumers and thus contribute to Sri Lanka's economic growth over the next 5 years.

NWSDB Corporate Plan 2020 - 2025

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> Chapter 5

Organisational Reforms for Business Efficiency

5. Organisational Reforms for Business Efficiency

Corporate Goal 5 and 6 – Introduce Organisational reforms to strengthen required functional areas for enhanced business efficiency and productivity, by introducing appropriate structural changes, effective processes and reducing administrative and overhead costs.

5.1 Present Structure and System

The NWSDB was established by the National Water Supply & Drainage Board, Law No.2 of 1974 as the National Organisation for the provision of safe drinking water to the people of Sri Lanka. The supply of drinking water through pipelines was until then, carried out by local authorities such as Municipal and Urban Councils. Following the establishment of the NWSDB, most of these schemes came under its purview, along with expectations of improvements to coverage and quality. Over the past 46 years since inception, the NWSDB has evolved to be an A Grade organization. As mentioned previously, the organisation has a multidisciplinary workforce of 9,534 made up of professional and non-professional categories. The Divisions which have been established based on work flow include:

- Operations & Maintenance which has a majority of the workforce (with 8,052 employees) comprises Technical (Engineers, Engineering Assistants & Technicians), Commercial, Consumer Relations, Accounts, Chemists, and Sociologists.
- Development which is responsible for investigations, planning, designing and construction of new water supply projects
- Development of Rural Water Schemes and
- Support Services, comprising Finance, Human Resources and Procurement.

The NWSDB follows a decentralised model in which financial authority as well implementation is decentralized to three key service zones; namely, Western, Northern-Central, and Southern-East each of which are headed by an Additional General Manager (Addl. GM) who is based at Head Office. Additionally, each province is headed by a Deputy General Manager (DGM) under whose purview the respective O&M, Development, and Support service arms function whilst the Western zone, considering its large consumer base, of 1.06 Million, comes under the purview of three DGM's.

The NWSDB at present operates with a positive balance sheet. However, the large capital requirement to meet the set objectives (to enhance access to 57.6% of the population) requires an infusion of funding. As enumerated elsewhere in this report, a disbursement of LKR 990 Bn is required over the next four years.

Upon achievement of these ambitious targets, it would also become the responsibility of NWDSB to ensure that these assets are maintained well, so that quality water continues to be supplied sans supply interruptions. More over, efficiency, of implementation and operations is also crucial to ensure sustainability of the achievement and prevent the transfer of any additional burden in the form of unfair tariffs to customers,.

5.2 Organisational Reforms

In this context, the Chairman and the Board of Directors have identified the need for organizational reforms to achieve its ambitious goal, and these reforms target five key areas.

A team of identified employees will be deployed to spearhead action towards the target whilst the Senior Management team would be strengthened with the addition of a few new positions. And responsibility towards key functions of water production and distribution would be further strengthened by designating senior managers for each of these specific functions.

The critical importance of Information Technology (IT) in commerce and business, continues to increase at a rapid pace. Considering the value it can add to NWDSB in increasing efficiency and customer service levels, it will create a Senior Management position to lead a digital transformation in the organisation.

NWDSB aims to reach self-sustenance upon the achievement of its coverage targets. However, experience over the past few years (from 2012) indicates that tariff revisions have not been considered favourably by successive Governments. Thus, new strategies for revenue generation need to be explored. In addition, enhancing customer relationships as a service organization is also a high priority of the NWDSB. Appointment of Senior Managers tasked with developing unique sales plans and marketing strategies and Human Resource objectives would bolster our efforts to become self-sustaining.

5.3 Alternative Strategies for Financial Viability and Service Excellence

A set of new strategies to augment income and service levels is also currently being considered by the Chairman and the Board of Directors.

- The formation of subsidiaries which can venture into revenue generating activities, as done by some state sector organisations such as LECO and SLT services; is one that the NWSDB will explore. Such a subsidiary established in partnership with the private sector, could venture into promote the local production of material needed for its projects.
- Moreover, harnessing the reservoir of multi disciplinary expertise at NWDSB to generate additional value by offering the expertise as Consultants to international consultancies on Water and Wastewater projects worldwide; is another option which is being explored.
- Embracing new technologies and automation to improve business efficiency and Carbon footprint such as smart meters, and renewable energy, is a high priority.
- Greater value addition to the higher revenue generating Industrial, Commercial, Institutional and real estate water users.
- Improvements to the water supply to the 20.2% of households who could not be connected to NWSDB. This segments of the population, will be provided immediate assistance by establishing a database of water availability with the help of District Secretaries/ Divisional Secretaries/ Grama Niladhari via, low-cost alternatives such

as rainwater harvesting and by providing technical and other support to Community Based Organisations.

5.4 Details of Organizational Reforms for Business Efficiency Improvements

REFORM -1 : - Establishment of A Water Excellence Centre

OBJECTIVE :- To bring water quality testing / surveillance, R&D and training under one umbrella and harness synergies, by creating a national organization which would eventually become commercially viable and self sustaining.

CONCEPT :- The two Governments of China and Sri Lanka signed a Memorandum of Understanding (MOU) for R&D in order to resolve water quality issues in the country , and to find the root causes of CKDu and other water related issues. The Joint Research and Development Centre (JRDC) which resulted from the MOU, is expected to function as the largest water related research laboratory and training centre in the South Asian region.

The concept of a Water Excellence Centre will include the Man Power Development and Training Centre (MD&TC) and the R&D section of the NWSDB; to operate under a single umbrella, yielding synergies for all stake holders. It is to operate under a Business Development Model and be a knowledge hub which promotes best practices, research support and training. By providing its expertise for R&D, knowledge transfer and water quality testing, it will not only boost productivity in the sector but also stimulate entrepreneurship, innovation and applied learning. The Centre aims to be a role model for other fields who would like to facilitate synergies and knowledge sharing. It would also collaborate with the global community in journeying towards the SDG's.

The Centre would include a financially viable and independent Strategic Business Unit (SBU) with a self funding strategy via its core businesses such as capacity building and research.

REFORM -2 :- Establishment of a Project Management and Administration Unit/ Division

OBJECTIVE :- Strengthening the project formulation, project management and administration functions.

CONCEPT :- The NWDSB has identified a unit which will act as a Contract Management Advisory Unit to monitor projects from formulation and inception to implementation; to ensure that all key aspects (Land / Water resources / environment) are covered and all due processes and due diligence is carried out at each stage.

REFORM -3 :- Strengthening Commercial, Public Relations and IT Functions

OBJECTIVE :- Strengthen business promotion (Additional Revenue) and marketing functions and make improvements to proposed strategies to ensure their viability.

A committee was appointed to study and establish a specific time frame and a realistic and achievable action plan for promotion of business activities in the NWSDB. The objective is to establish a Unit / Cell / Section with Marketing and Public Relations Expertise. The action plan will be based on strategies as noted below.

- 1) Identification of organizational arrangements and its cadre requirements.
- 2) Recruitment of expertise for identified roles.
- 3) Obtaining of approval of the Board of Directors for organizational structure
- 4) Establishing an interim management option and identifying all possible revenue areas.
- 5) Formation of a Marketing Division
- 6) Deployment of Meter Readers for house connections and service enhancement
- 7) Deploying University students to carryout promotional activities on incentive basis.
- 8) Strengthening public relations to increase connections to increase revenue.
- 9) Provide inputs from Sociologists to identify and facilitate data collection and improve public awareness on water.
- 10) Obtaining Board approval for a conceptual proposal for additional revenue generation
- 11) Progress evaluation and feed back to Board of Directors.

The proposed Marketing Department will consist of a Marketing Director, Marketing Manager, Marketing Communication Manager, Market Research Analyst and a Marketing Consultant

Two options being considered for establishment of a Marketing Division :

1) Establishing a separate Marketing division

2) Amalgamation of Commercial and Corporate Communication and re positioning of it as a Marketing and Business Promotions Division.

At present revenue collection begins with Meter Readers who have been assigned to each water supply scheme. The introduction of Smart Meters island-wide, will free up those employed in Meter reading, thus requiring their deployment to more value adding activities.

The Committee has identified alternative revenue enhancement strategies as well. These include the following :

- 1) Water quality testing using the NWSDB Laboratory network.
- 2) Manufacture of water meters in the country.
- 3) Harnessing in house expertise, to offer consultancy services.
- 4) Explore possibility of using existing lands and buildings for revenue generation ventures, for example, the bottled water industry.
- 5) Establishment of a construction arm for private contracts and services.

REFORM -4 :- Establishment of a SBU (Autonomous) for a RSC (Colombo City)

OBJECTIVE :- The Colombo City's water supply system has been refurbished at a significant investment and use of best practices and with a District Metering Area (DMA) Management system to control NRW, which as a result has been reduced to a single digit. The NWDSB has also been able to institutionalize and internalize the knowledge and training gathered in the course of this exercise.

CONCEPT :- Establishment of strategic Business Unit for RSC in Colombo City that can be operated as a separate unit of the NWSDB.

The following steps would be taken for the establishment of an Autonomous RSC in Colombo City :

- 1) Obtaining Board approval for an Autonomous RSC in Colombo City assgining a high degree of financial and administrative authority.
- 2) Establishing financial and administrative authority levels and assigning responsibility of managing Colombo City NRW with an MIS based system and a proactive approach.
- 3) Inculcating an Asset Management concept and asset management procedures and practices to other RSCs.
- 4) Providing technical assistance on asset management and NRW management to other RSC's.
- 5) Introducing industry best practices and benchmarks to handle customer complaints , public relations, leak repairs, bidding and connection complaints to ensure customer satisfaction consumer welfare.

REFORM – 5 :- Establishment of a Fully Owned Subsidiary Company of NWSDB

CONCEPT - : Several legal and statutory conditions, prevent NWSDB as a statutory Corporation Body from engaging in certain realms of additional revenue generating activities. Moreover, its organization structure also limits the flexibility to engage in additional revenue generation activities. Hence, a subsidiary company will provide opportunity to augment revenue generation as well as enable a speedier and a more prompt service to consumers. The NWSDB expects a subsidiary to yield the following advantages :

- 1) Enhance the break down and emergency repair service capability by increasing the organisation's operational flexibility.
- 2) Engage in business ventures such as production of water meters, pipes, water bottling industry with bulk bottling, and manufacture of Chemicals.
- 3) Undertake consultancy work locally and overseas.

Reform -: 6 Separation of Production and Distribution Functions

OBJECTIVE :- To separate "Production" function from "Distribution" function to achieve greater accountability and transparency as well as efficiency and productivity.

The Production and Distribution functions at present are managed by the RSCs as one interconnected function and the separation of functions would yield several advantages to management as well as consumers.

Separation of the Production function would give it an individual identity and greater recognition to its key elements such as production master planning, production advance strategic planning , preventive maintenance optimization, quality assurance enhancement and production cost reduction. Similarly, the separation of the Distribution function would, by enabling a stronger identity, result in greater accountability and more effective action in areas such as network planning, advanced preventive maintenance programs, NRW programs and commercial activity

5.5 Service Excellence

Whilst working towards the Government's targets, of providing safe drinking water to 100% of the population; technology improvements, excellence in customer service and professionalism in all our activities and engagements with all our stakeholders will be key priorities and values which will ensure the sustainability of the organization and the value it creates.


ANNEXES



ANNEX 1 : Ongoing Projects

No	Project	WTP Capacity (m ³ /d)	New Connections (Domestic) Nos	Expected Date of Completion
Fore	ign Financing		1105	
1	Polgahawela, Pothuhera and Alawwa Integrated Water Supply project	29,000	32,500	Apr-21
2	Kelani Right Bank WSP	180,000	12,750	Oct-20
3	Greater Matale WSP	75,000	20,000	Dec-20
4	Gampaha, Attanagalla & Minuwangoda Integrated Water Supply Scheme	54,000	18,975	Dec-22
5	Aluthgama, Mathugama and Agalawatta Integrated Water Supply Project	74,250	29,000	Apr-21
6	Matara Stage IV WSP	30,000	9,000	Mar-22
7	Thambuttegama WSP	18,000	25,000	Dec-22
8	Katana WSP		15,800	Nov-20
9	Replacing of Transmission and Distribution Mains from Orugodawatta to Kaduwela Project	-	-	Dec-21
10	Hemmathagama Water Supply Project	21,000	14,400	Jun-22
11	Deduru Oya Water Supply Project	15,000	14,750	Nov-20
12	Anamaduwa Integrated Water Supply Project	11,000	6,450	Nov-21
13	Kandy North Pathadumbara Integrated Water Supply Project	50,000	41,000	Nov-22
14	Kirama Katuwana Integrated Water Supply Project	3,500	3,850	Aug-21
15	Dry Zone Urban Water & Sanitation Project			Jul-20
16	Jaffna Kilinochchi Water Supply & sanitation Project	24,000	60,000	Sep-23
17	Colombo Water Supply service Improvement Project 1 (Package 1)			Dec-20
18	Colombo Water Supply service Improvement Project 1 (Package 2)			Sep-21
19	Colombo Water Supply service Improvement Project 2 (Package 3 and Package 4)			Dec-22
20	Ambatale Water Supply System Improvement & Energy Saving Project			Dec-22
21	Anuradhapura North Water Supply Project - Phase 1	9,400	9,428	Mar-21
22	Anuradhapura North Water Supply Project Phase II	17,500	25,000	Dec-24
23	Kalu Ganga Water Supply Expansion Project (1)	140,000	185,000	Dec-25
24	Ruwanwella Water Supply project	4,000	4,800	Jun-22
Loca	l Financing Projects			
25	Towns East of Colombo (Package 1) WSP			Feb-20
26	Towns East of Colombo (Package 2) WSP			Dec-20
27	Towns East of Colombo (Package 3) WSP		32,000	Aug-20
28	Wilgamuwa WSP	5,500	6,375	Dec-20
29	Laggala WSP	4,000	5,125	Mar-21

No	Project	WTP Capacity (m ³ /d)	New Connections (Domestic)	Expected Date of Completion
			Nos.	- compression
30	Galageddara Mawathagama WSP		7,140	Aug-20
31	Medirigiriya WSP		4,500	Jul-20
32	Galle Cluster WSP		12,505	Nov-20
33	Attampitiya WSP	3,000	700	Feb-21
34	Greater Rathnapura WSP		5,950	Dec-20
35	Giridara WSP		4,500	Dec-20
36	Second Phase of the Pipe Laying Project from Andaragasyaya underground tank to Gannoruwa in Hambantota District		2,800	Dec-20
37	Thissamaharmaya WSS		2,000	Dec-20
38	Water Supply Facilities for Resettlement Villages in Kegalle District		800	Jul-21
39	Augmentation of Trincomalee Water Supply Scheme			Dec-21
40	Madhu Church Water Supply Scheme		2,900	Dec-21
41	Project for Enhancement of Operational Efficiency and Assets Management Capacity of RSC (Western South) NWS&DB)			Jun-21
42	Matara Short Term Improvements		5,000	Dec-21
43	Bandarawela WSS improvement project		2,500	Aug-20
44	Dankotuwa WSS		4,590	May-21
	TOTAL		638,038	

ANNEX 2: Proposed Improvements for Capacity & Quality Enhancement of Existing WSS

		Existing WTP	Production Increase	Total New Connections	Length of Pine
	Project Name	Capacity	(m ³ /day)	(Nos.)	Laying
		(m3/d)	× • • • •		(km)
	Western Central RSC	553,000	53,000	4,250	
	Colombo District	553,000	53,000	4,250	
1	Ambatale Water Treatment Plant Expansion Project	550,000	50,000		
2	Improvement of Awissawella Water Treatment Plant	3,000	3,000	4,250	
	Western North RSC	32,750	15,750	19,275	12
	Gampaha District	32,750	15,750	19,275	12
3	Augmentation of Gampaha WTP	3,500	2,000	2,500	
4	Augmentation of Divulapitiya WTP	1,250	1,750	1,875	
5	Rehabilitation of Raddolugama WSS	7,000	2,000	2,500	
6	Extension of Intake Structure at Pugoda	6,000		-	
7	Augmentation of Ranpokunawatta WTP	6,000	4,000	4,900	12
8	Augmentation of Veyangoda WSS	3,000	2,000	2,500	
9	Augmentation of Yakkala WSS	3,000	2,000	2,500	
10	Augmentation of Nittambuwa WSS	3,000	2,000	2,500	
	Western South RSC	120,550	11,000	11,000	1
	Kalutara District	120,550	11,000	11,000	1
11	Ingiriya Water Supply Improvement Project	550	1,000	1,000	
12	Capacity Improvement of Kadana WTP	120.000	10.000	10,000	
	North Western RSC	6.100	1.800	3.886	20
	Kurunegala District	500	500	500	3
13	Mawathagama Water Supply Project	500	500	500	3
	Puttalam District	5.600	1.300	3.386	17
14	Nattandiya - Wennappuwa Water Supply Scheme	1,100	400	1.886	9
15	Kakkapalliya Water Supply Project	4 500	900	1,000	8
1.5	North Central RSC	66.500	50,500	39.305	324
	Anuradhanura District	38.000	18,500	21.645	88
16	Augmentation of Thissawewa WTP	4 500	4 500	4 668	50
17	Augmentation of Thuruwila WTP	18,000	4 500	5 628	50
18	Construction of a 5 000m3/day capacity WTP at	2 000	5,000	4 840	1
10	Galnewa	2,000	5,000	1,010	1
19	Kalawewa WSS Improvements	13,500	4,500	6,509	37
	Polonnaruwa District	28,500	32,000	17,660	237
20	Improvements to Minneriva WTP & WSS	9,000	4,500	3,588	1
21	Augmentation of Polonnaruwa Old WTP	6.000	500	0	11
22	Augmentation of Gallella WTP	13.500	18.000	1.572	
23	Medirigiriya WTP -Phase 2	-	9,000	12,500	225
	North RSC	24.855	19.817	31,540	235
	Jaffna District	10,270	3.120	6,725	76
24	Augmentation of Delft WSS	100	100	350	18
25	Service Level Improvement in Naranthanai WSS	-	100	825	10
26	Improvement to Existing Water Supply Schemes in	170	740	1.250	45
	Thaiyaddi & Vadakkachchi			-,	
27	Improvement of WTP in Thottaveli, Murunkan & Point Pedro	10,000	2,180	4,300	3
	Kilinochchi District	7,600	7,600	9,815	58
28	Improvement to Existing WTP at Kilinochchi	3.800	3.800	4.000	
29	Improvement to Akkarayan WSS	2,000	5,000	800	
30	Paranthan to Palai Transmission Main			2 200	25
31	Groundwater Source Development in Northern	3,800	3,800	2,815	33
	region				
	Mannar District	30	1,147	4,400	84
32	Rehabilitation of Thalai Mannar WSS	30	900	1,800	49

	Project Name	Existing WTP Capacity (m3/d)	Production Increase (m ³ /day)	Total New Connections (Nos.)	Length of Pipe Laying (km)
33	Service level Improvement in Musali Water supply scheme		247	2,600	35
	Mullaitivu District	955	1,200	3,700	18
34	Service Level Improvement in Mankulam Water			700	
25	supply scheme	500	(00	1.500	
35	Augmentation of Oddusuddan & Nedunkerney WSS (stage 1 & 2)	580	600	1,500	
36	Augmentation of Pandiankulam & Mallavi WSS	375	600	1,500	18
	Vavuniya District	6,000	6,750	6,900	
37	Peraru Bund raising for additional 0.8MCM	6,000	6,000	4,400	
38	Service Level Improvement in Cheddikulam WSP		750	1,500	
39	Improvement to Omanthai WSS	10 500	44 500	1,000	
	Central RSC	13,500	11,500	7,000	21
40	Kandy District	13,500	11,500	7,000	21
40	Medadumbara WSS & Pipe Laying		1,500		18
41	Augmentation of Balagolla WTP	10,000	6,000	3,500	
42	Augmentation of Marassana WTP	3,500	4,000	3,500	3
	Southern RSC	82,385	67,900	47,600	228
	Galle District	30,500	9,000	6,300	57
43	Capacity improvement and distribution expansion project of Baddegama WSS	30,000	6,000	3,000	30
44	Capacity improvement and distribution expansion project of Pitigala WSS	300	1,000	1,000	3
45	Capacity improvement and distribution expansion project of Udugama WSS	200	2,000	2,300	25
	Hambanthota District	42,800	53,000	35,500	169
46	Capacity improvement and distribution expansion project of Lunugamwehera WSS Phase I & II	9,000	6,000	3,000	12
47	Capacity improvement and distribution expansion project of Kataragama WSS (Short Term)	5,500	9,000	6,500	34
48	Barawakumbuka short term Phase I		6,000		5
49	Barawakumbuka short term Phase II			5,000	49
50	Nawayalawila source Improvement Project of Tangalle WSS	9,000	6,000	4,000	
51	Augmentation of Muruthawela WSS and Distribution Expansion	5,000	6,000	5,000	23
52	Augmentation of Kattakaduwa WTP and distribution expansion project of Ranna WSS	12,000	12,000	6,000	
53	Construction of 6,000 m3/day capacity WTP and Transmission and Distribution expansion for Wakamulla WSS (Phase 1)	1,200	6,000	5,000	1
54	Wakamulla WSS (Phase 2)			0	43
55	Augmentation of Bundala WSS	300	1,000	500	2
56	Augmentation of Katuwana WSS	800	1,000	500	
	Matara District	9,085	5,900	5,800	3
57	Augmentation of Hallala WSS	8,000	3,000	3,000	
58	Capacity Enhancement & Distribution Expansion project of Hakmana WSS	900	900	300	3
59	Capacity improvement and distribution expansion project of Urubokka WSP	185	2,000	2,500	
	Sabaragamuwa RSC	52,400	32,100	23,220	159
	Kegalle District	39,900	22,100	12,820	41
60	Integration of Kegalle WSS	8,500	2,500	1,500	
61	Upgrading Moronthota WTP and associated Transmission and Distribution System improvements	11,250	6,750	-	3

	Project Name	Existing WTP Capacity (m3/d)	Production Increase (m ³ /day)	Total New Connections (Nos.)	Length of Pipe Laying (km)
62	Upgrading Mawanella WTP and associated Transmission and Distribution System improvements	15,000	3,000	3,000	12
63	Supply and laying of gravity transmission main to Adurapotha tank		-	-	5
64	Improvements of the Intake weir of Yatiyanthota Water Treatment Plant	950	1,050	1,320	
65	Upgrading Dehiowita WTP & Distribution Improvements	1,000	2,000	2,500	12
66	Upgrading existing Ruwanwella water treatment plant	2,000	4,000	2,000	
67	Upgrading existing Warakapola WTP & Distribution Improvements	1,200	2,800	2,500	9
	Rathnapura District	12,500	10,000	10,400	118
68	Upgrading Pelmadulla WTP & Distribution Improvements	3,000	1,500	3,000	29
69	Augmentation of old Balangoda WTP & Laying of DI pumping main	3,000	4,000	2,000	1
70	Construction of Intake at Thalavitiya, Raw water transmission and Aerator for improving quality of service in Eheliyagoda WSS	1,400	-	-	8
71	Improving of existing Kiriella WTP & Distribution Improvements	600	-	600	8
72	Augmentation of Kahawatte WTP and distribution expansion to Opanayake	4,500	4,500	4,800	73
-	Uva RSC	23,058	26,550	28,802	136
	Badulla District	3,308	6,850	10,603	96
73	Improvements to Nayabedda water source and distribution improvement in Bandarawela and suburb area		1,000	4,055	42
74	Water Treatment Improvement in Badulla District WSS	3,268	1,350	1,333	
75	Improvemnts to Kandekatiya wss	40	4,500	5,215	54
	Monaragala District	19,750	19,700	18,199	40
76	Improvement to Icepihilla WTP, Wellawaya WSS	2,000	2,000	2,319	
77	Wellawaya Stage II phase I	9,250	10,000	6,955	20
78	Water Treatment Improvement in Monaragala District WSS(Medagama, Siyabalanduwa, Sewanagala)	3,400	200	232	1
79	Capacity and Distribution improvement to Buttala WSS	4,300	1,500	1,738	19
80	Bibila Medagama WSS -Phase l	800	6,000	6,955	1
	East RSC	30,600	15,850	22,594	269
	Ampara District	20,900	1,750	7,050	86
81	Improvement of Service Level at Panama WSS		450	1,250	1
82	Improvement to Thirukkovil WSS	6,500	-	4,725	14
83	Improvement of Dehiytakandiya & Lihiniyagama WSS	4,700	600	550	54
84	Improvement of Bangalawadiya WTP at Sammanthurai	9,000	-	-	
85	Improvement of Padiyathalawa WSS	700	700	525	17
	Batticaloa District		5,000	805	48
86	Increase service coverage in Unnichchai and surrounding areas			805	28
87	Augmentation of Valachchanai Paper Mill WSS		5,000	0	20
	Trincomalee District	9,700	9,100	14,739	136
88	Distribution improvement in Kinniya DS area			2,025	4

	Project Name	Existing WTP Capacity (m3/d)	Production Increase (m ³ /day)	Total New Connections (Nos.)	Length of Pipe Laying (km)
89	Upgrading Muthur WTP & Intake improvement at Neelapola	8,500	8,500	2,230	
90	Service level improvement to Trincomalee City and Sorrounding areas			3,525	15
91	Increasing service coverage and Service level improvement in Dehiwatha , Thoppur and surrounding areas			1,210	91
92	Water quality improvement in Pulmoddai WSS	1,200	600	1,910	
93	Water Source improvement in Eachchliampattu WSS			804	8
94	Water supply extension to Naddouththu and Sorrounding areas from Muthu WTP			3,035	17
95	Intake Improvement of Integrated Trincomalee WSS at Allai Kanthale			0	1
	TOTAL		295,767	238,472	1,405

ANNEX 3: Improvements for utilization of full capacity of existing Water Supply schemes and efficiency improvements

	Project Name	Length of Pipe Laying(km)	Total New Connections (Nos.)
Distrib	ution Infilling & Expansion	4,656	243,454
	Western Central RSC	118	13,450
	Colombo District	118	13,450
1	Laying of Pipes Along Infilling Areas of Towns East of Colombo District Water Supply Project -Phase I	28	4,000
2	Laying of Pipes Along Infilling Areas of Towns East of Colombo District Water Supply Project -Phase II	90	9,450
	Western North RSC	635	33,500
	Gampaha District	635	33,500
3	Supply & laying of pipes from Delgoda to Belummahara	10	2,000
4	Kelaniya Distribution Improvement - Phase I (Water Supply to Parakandeniya Area in Gampaha District	18	1,500
5	Implementation of infilling work in ongoing Katana Water Supply Project Area - Stage I	21	1,500
6	Kelaniya Distribution Improvement - Phase II	10	1,500
7	Implementation of balance part of distribution network in ongoing Gampaha Attanagalla and Minuwangoda Integrated Water Supply Scheme - Gampaha and Nittambuwa area	220	10,000
8	Implementation of infilling work in ongoing Katana Water Supply Project Area - Stage II	21	1,500
9	Distribution Improvement in Gampaha - Stage I.	20	1,500
10	Infilling work in Katana Water Supply Project Area - Stage III	195	5,500
11	Infilling Work of Gampaha, Attanagalla and Minuwangoda Integrated Water Supply Scheme	120	8,500
	Western South RSC	225	11,000
	Kalutara District	225	11,000
12	Distribution expansion of Matugama / Agalawatta areas in Kalutara district	225	11,000
	North Western RSC	1,247	43,985
	Kurunegala District	747	22,070
13	Distribution Expansion in Deduru Oya Integrated Water Supply Project & Ambanpola, Galgamuwa Area	205	9,200
14	Distribution Expansion in Polgahawela - Pothuhera - Alawwa Integrated Water Supply Project	542	12,870
	Puttalam District	500	13,500
15	Distribution Expansion in Anamaduwa Integrated Water Supply Project	500	13,500
	North Central RSC	199	8,466
	Anuradhapura District	189	8,396
16	Distribution infilling and extension of Habarana WSS	47	1,554
17	Distribution infilling and extension of Madatugama WSS	142	6,842
10	Polonnaruwa District	9	70
18	Distribution infilling of Hingurakgoda WSS	3	25
19	Distribution infilling of Minneriya WSS	2	15
20	Distribution infilling of Polonnaruwa & Gallela WSS	5	30
		184	4,575
	Janna District	68	1,725

	Project Name	Length of Pipe Laying(km)	Total New Connections (Nos.)
21	Infilling of Distribution lines in Jaffna Region (Jaffna, Kilinochchi, Mullaithivu)	68	1,725
	Mullaitivu District	30	500
22	Infilling and Distribution Expansion of WaSSIP (Kilinochchi/Mullaithivu) in Kilinochchi & Mullaithivu	30	500
	Vavuniya District	86	2,350
23	Infilling of Distribution lines in Vavuniya Region (Mannar WSS, Adampan WSS, Thevanpiddy WSS, Vidathalthevu WSS and vavuniya WSS-2 Stages)	86	2,350
	Central RSC	272	24,179
	Kandy District	191	22,200
24	Distribution & Transmission of Marassana WSP	30	1,200
25	Connection enhancement programe in Central province	161	21,000
	NuwaraEliya District	20	1,079
26	Proposed pipeline extension in Ginigathhena, Walapane and Maskeliya WSSs	20	1,079
	Matale District	61	900
27	Distribution Improvement of Wilgamuwa WSP	10	400
28	Distribution & Transmission of Laggala WSP	51	500
	Southern RSC	862	52,500
	Matara District	862	52,500
29	Matara Stage IV Distribution Improvement Project - Phase I	862	52,500
	Sabaragamuwa RSC	64	18,300
	Rathnapura District	51	14,300
30	Godakawela Distribution expansion	15	1,300
31	Improvement and taking over of CBOs in Padalangala and Thorakolayaya area	36	13,000
	Kegalle District	13	4,000
32	Distribution improvements in Ruwanwella WSS	13	4,000
	Uva RSC	201	16,294
	Badulla District	153	11,171
33	Transmission and Distribution Expansion of Ettampitiya water supply project	7	1,635
34	Taking over bulk water supply connection to NWSDB by doing improvement in Badulla District	10	3,161
35	Distribution improvements in Demodara WSS	136	6,375
	Monaragala District	48	5,123
36	Transmission and Distribution Expansion of Siyabalanduwa WSS	16	1,090
37	Taking over of Bulk Water Supply connection to NWSDB by doing improvements in Monaragala District	10	3,161
38	Taking over of Sooriyaara (Wassip) WSS and extension to Nikawewa balance and Mahawewa area	23	872
	East RSC	649	17,205
	Ampara District	532	14,355
39	Extension to Serankade Village at Padiyathalawa	62	1,850
40	Infilling at Aranthalawa, Tempitiya, Borapola and Pullumalai villages in Mahaoya	51	1,375
41	Infilling at Centralcamp, Gonagalla, Paragahakele & Uhana WSS	296	8,400

	Project Name	Length of Pipe Laying(km)	Total New Connections (Nos.)
42	Pipeline extension and infilling to Damana, Panankadu, Alikambe-Kannagikiramam & Akkaraipattu WSS	124	2,730
	Batticaloa District	90	2,525
43	Distribution Expansion in Batticaloa District	90	2,525
	Trincomalee District	27	325
44	Water Supply extension to Sooroyapura in Kanthale DS Division	27	325
	TOTAL	4,634	235,039
Busines	ss Efficiency Improving Projects (NRW Reduction & Energy Saving)	1,553	16,693
	Western South RSC	19	7,664
	Kalutara District	19	7,664
45	Laying of Transmission main from Alwis Place to Wadduwa	12	3,272
46	Laying of 500mm dia. DI pipe line from Kethhena WTP to Central Junction	7	4,392
	North Western RSC		
	Kurunegala District		
47	Lake Side Pump Installation (Energy Project)		
	North Central RSC	32	509
	Anuradhapura District	3	
48	Anuradhapura New Town WSS-Replacing of pumping lines of Stage II & III water towers	3	
49	Supply and installation of horizontal split casing pumps at Nuwarawewa WTP for Stage II & III water tower		
50	Supply & installation of Surge Vessel to Anuradhapura North WSS		
	Polonnaruwa District	29	509
51	Replacing of Gravity main from Minneriya (Patapilikanda Sump) to Hingurakgoda Tower	6	
52	Distribution line replacement of Aralaganwila WSS	17	436
53	Distribution line replacement of Manampitiya WSS	7	73
54	Supply and installation of surge vessel at Minneriya WTP for transmission line to Patapilikanda sump		
	North RSC	35	3,600
	Jaffna District	35	3,600
55	NRW Reduction Programmes in (Jaffna, Kilinochhci, Mullaithivu, Vavuniya & Mannar)	35	3,600
56	Solar Power System for Jaffna & Vavuniya Regions		
	Sabaragamuwa RSC		
	Rathnapura District		
57	Capacitor bank-Muwagama Intake, Emblipitiya TP, Embilipitiya Intake, Kahawaththa Intake & Balangoda hospital Intake		
58	Intake Pump-Balangoda Old plant		
59	Intake Pump-Muwagama plant		
60	High lift Pump-Muwagamkanda to Samagipura plant		
61	High lift Pump- Samagipura tank to Konagoda tank		
62	Solar Power (PV) system for Ratnapura Region		
63	Intake Pump-Kahawaththa		
	Kegalle District		
64	Solar Power (PV) system for Kegalle Region		

	Project Name	Length of Pipe Laying(km)	Total New Connections (Nos.)
	East RSC	1,467	4,920
	Ampara District	1,449	2,695
65	Replacement of PVC pipe service connection to HDPE pipe in Ampara & Akkaraipattu region	1,217	1,345
66	Zoning arrangement at water supply schemes in Ampara & Akkaraipattu Region	55	675
67	Replacement of Old Standard pipe (unusual diamater pipe) in the distribution system in Akkaraipattu Region	177	675
	Batticaloa District		
68	Connection Transfer to PE and shifting meters to suitable locations in Batticaloa region		
	Trincomalee District	18	2,225
69	Connection Transfer to PE and shifting meters to suitable locations in Trincomalee Region		2,025
70	Replacement of bundle pipe in the distribution system in Trincomalee Region	17	100
71	71 Zoning arrangement in distribution system - Trincomalee Region		100
Priorit Genera	y for enhancement of Revenue by Providing Connections for revenue ating Consumer Segment	79	1,637
	North Western RSC	47	1,450
	Kurunegala District	47	1,450
72	Distribution expansion in Kurunegala WSP	9	400
73	Distribution Expansion in Thorayaya WSP	38	1,050
	North Central RSC	6	2
	Polonnaruwa District	6	2
74	Water Supply to Aralaganwila Police Training School - Aralaganwila WSS	6	2
	East RSC	26	185
	Batticaloa District	26	185
75	Water Supply extension to tourist areas at Passikuda in Batticaloa District	6	25
76	Extension of pipe laying in tourist area Kallady, Batticaloa District	20	160
	TOTAL	6,288	261,784

S#	Name of the Project	District	WTP Capacity (m3/d)	Length of Pipe Laying (km)	Total New Connecti ons (Nos.)
Bate	h 1: New Projects to be implemented in year 2021 with V	Vater treatmen	t Plant and Int	ake Constr	uction
	Western Central RSC		5,000	-	-
1	Construction of New WTP at Awissawella	Colombo	5,000	1	r
	Western North RSC		40,000	1,631	42,500
2	Mirigama WSP - Stage I	Gampaha	20,000	778	20,750
3	Divulapitiya WSP - Stage I	Gampaha	20,000	853	21,750
	North Western RSC		154,000	3,271	248,020
4	Katupotha - Bamunakotuwa - Panduwasnuwara WSP	Kurunegala	20,000	722	31,700
5	Bingirya - Udubaddawa & Makadura-Pannala-	Kurunegala	40,000	1,133	63,400
	Kuliyapitiya Integrated WSP - Phase I	D (11	20.000	224	21.700
6	Dankotuwa WSP - Phase I	Puttlam	20,000	234	31,700
7	I owns North Of Kurunegala (INK) WSP - Phase I	Kurunegala	50,000	254	78,000
8	Chilaw WSP - Stage II	Puttlam	12,000	395	20,160
9	Puttalam WSP- Stage II	Puttlam	12,000	533	20,160
10	North RSC	IZ:1: 1 1:	50,000	-	36,000
10	Jaffna Kilinochchi IWSP - Stage II	Kilinochchi	50,000	1.007	36,000
11	Central RSC	TZ 1	74,500	1,006	133,840
11	Kundasale Haragama WSP	Kandy	50,000	357	91,300
12	Nanuoya wSP	Nuwara	2,000	12	4,525
12	Harress and alarres WCD	Eliya	7.500	125	10.212
13	Hapugasthalawa w SP	Flive	7,500	135	10,313
14	Dalthata WSD	Ellya	5.000	122	6.020
14	Madadumbara Danuvila WSD	Kandy	3,000	221	0,930
13	Southern BSC	Kandy	10,000	025	20,733
16	Greater Calle WSD Stage III	Galla	50,000	207	54 200
10	Dicatel Galle WSF - Stage II	Galle	30,000	217	28,000
17	Lunucemuere IWSD Dheee L & H	Hambanthat	25,000	221	28,000
10	Lunuganiwera rw Sr - rnase r & m	a	25,000	551	20,000
	Sabaragamuwa RSC	u	55 500	303	56 403
19	Kiriella WSP	Rathnanura	3,000	34	4 740
20	Embilipitiva Paper Mill WSP	Rathnanura	30,000	51	20.325
20	Balangoda WSP - Stage II	Rathnapura	7 500	258	10 363
21	Fheliyagoda WSP	Rathnanura	15,000	102	20.725
22	Uva RSC	Ruimapura	50,000	1 271	54 092
23	Bandarawela WSP - Phase I &II	Badulla	20.000	651	23.183
24	Badalkumbura WSP	Monaragala	5.000	77	5.215
25	Bibila Medagama WSP - Phase 11	Monaragala	5.000	149	6.955
26	Hambegamuwa WSP	Monaragala	4.000	138	4.057
27	Loggalova WSP	Badulla	4.000	102	3.091
28	Wellawaya WSP - Stage II phase II	Monaragala	12.000	156	11.591
	East RSC	B	39.000	384	54.225
29	Morawewa, Gomarankadawala & Padavisipura WSP	Trincomalee	4.000	303	5,100
30	Greater Trincomalee Expansion WSP	Trincomalee	20,000	30	25,500
31	Valachchenai WSP	Batticaloa	15,000	51	21,125
	Sub Total 1		573,000	8,891	725,280
Bate	h 1: New Projects to be implemented in 2021 with Pine	Laving and Oth	ner Works		- ,= • •
	Western Central RSC		-	351	-
32	Upgarading Water Supply Facilities in Jubilee Kotte Area	Colombo		133	-
33	Upgarading Water Supply Facilities in Kolonnawa Area	Colombo		219	-
	Western North RSC			497	77.000
34	Infilling work of KRB Project Stage II in Kelaniya	Gampaha		497	77,000
	Region				
	Western South RSC		-	296	26,000
35	Ingiriya - Hadapangoda WSP	Kaluthara		296	26,000

			WTP	Length	Total
S#	Name of the Project	District	Canacity	of Pipe	New
S.	i dance of the i roject	District	(m3/d)	Laying	Connecti
			()	(km)	ons (Nos.)
36	Construction of Salinity Barrier - Kalu Gaga	Kaluthara	F		-
	North Western RSC		-	248	7,950
37	Melsiripura WSP	Kurunegala		123	3,975
38	Extension to Rasnayakapura	Puttlam		125	3,975
20	North RSC	T CC	-	38	850
39	Chunnakam WSP	Jaffna		38	850
40	Central RSC	Mathala	-	758	51,304
40	Greater Matale w SP - Stage II	Mathale		/38	51,304
	Sub Lotal 2	1	-	2,188	163,104
Dete	IUIAL-Batch I) 2022::4h X	573,000	11,0/9	888,380
Gane	n 2: New Projects to be implemented in year 202	22-2023 with V	vater treatme	nt Plant	апа іптаке
Cons	Western Central RSC	1	180.000		_
41	Weliwita WSP - Head Works (Stage-1)	Colombo	180,000	I	_
71	Western North RSC		57 000	060	69.400
42	Kiridiwala WSP Stage I	Gampaha	30,000	/10	40,000
42	Gamnaha Attanagalla Minuwangoda WSP - Stage II	Gampaha	27,000	550	29,400
	Western South RSC	Gampana	50 000	600	80.000
44	Kethhena Improvement & Expansion Project	Kaluthara	50,000	600	80,000
44	North Western BSC	Kalutilala	22 000	000	34 760
45	Kalpitiya WSD	Duttlam	12,000	-	18 860
46	Galgamuwa - Ebatuwewa - Ambannola WSP	Kurupegala	10,000		15,000
+0	North Control BSC	Kurunegala	64 000	3 474	99 284
47	Anuradhanura South WSP - Phase II	Anuradhanu	10,000	257	12 856
7/	Andradhapura South WSF - Thase If	ra	10,000	237	12,050
48	Palugaswewa WSP	Anuradhapu	5.000	355	6.428
	8	ra	-,		-,
40	Terrer East of Dalama merer WCD	Polonnaruw	48.000	2.972	80,000
49	Towns East of Polonnaruwa w SP	а	48,000	2,862	
	North RSC		2,750	74	2,600
50	Kankesanthurai WSS- Stage 1	Jaffna	1,000	21	850
51	Chulipurm WSS-Stage 1	Jaffna	750	48	1,250
52	Point Pedro & VVT (RO Plant) WSS	Jaffna	1,000	5	500
	Central RSC		48,500	910	60,616
53	Hasalaka WSP	Kandy	7,500	208	13,200
54	Pundaluoya WSP	NuwaraEliy	5,000	72	6,880
		а			
55	Hatharaliyadda WSP	Kandy	5,000	111	6,963
56	Nawalapitiya Pallegama WSP	Kandy	2,000	58	2,750
57	Pupuressa Atabage WSP	Kandy	10,000	148	12,430
58	Ganga Ihala Korale WSP	Kandy	10,000	150	10,450
59	Naula Wahakotte WSP	Mathale	4,000	80	5,193
60	Kothmale River Side WSP	Kandy	5,000	83	2,750
	Southern RSC		98,000	521	98,300
61	Imaduwa WSP	Galle	6,000	64	7,300
62	Kataragama Long term -Phase I &II	Hambanthot	15,000	106	5,600
		a			
63	Ruhunupura - Stage II	Hambanthot	20,000	42	10,000
()		a	7.500	1.1	0.000
64	Augmentation of Hakmnana WSS	Mathara	7,500	11	9,000
65	Deniyaya WSP	Mathara	6,000	156	7,400
66	Morawaka WSP	Mathara	6,000	142	8,500
67	Mathara - Stage V	Mathara	30,000		42,500
68	Deyyandara-Mulatiyana WSP	Mathara	7,500	0	8,000
			00.000	215	110.000
(0)	Sabaragamuwa RSC	D (1	82,000	317	119,030
69	Doloswala, Nivithigala, Karavita WSP	Rathnapura	5,000	0	6,855
/0	Deniowita WSP	Rathnapura	15,000	0	23,600
/1	Kuruvita WSP	Kathnapura	5,000	18	6,975

S#	Name of the Project	District	WTP Capacity (m3/d)	Length of Pipe Laying (km)	Total New Connecti ons (Nos.)	
72	Kalawana WSP	Rathnapura	5,000	106	5,380	
73	Warakapola WSP	Kegalle	15,000	193	15,800	
74	Integration of Kegalle WSS	Kegalle	10,000	0	20,200	
75	Rambukkana WSP	Kegalle	15,000	0	24,600	
76	Greater Rathnapura WSP - Stage II	Rathnapura	18,000		17,500	
	Uva RSC		73,500	6,277	81,506	
77	Gawarammana Bogahakumbura WSP	Badulla	15,000	173	16,227	
78	Yahalarawa WSP	Badulla	2,000	48	2,319	
79	Ulhitiya WSP	Badulla	4,000	136	3,477	
80	Thaldena Meegahakiula WSP	Badulla	5,000	68	4,057	
81	Welimada Stage II	Badulla	4,000	101	2,319	
82	Thanamalvila Sevanagala IWSP	Monaragala	10,000	5,750	1,932	
83	Springvelly WSP	Badulla	2,000		2,750	
84	Haldummulla WSP	Badulla	1,500		1,738	
85	Greater Monaragala WSP	Monaragala	30,000		49,050	
	East RSC		18,500	205	17,675	
86	Water supply Improvements in Muthur East area	Trincomalee	10,000	52	12,750	
87	Lahugala WSP	Ampara	1,000		1,310	
88	Dehiyaththakandiya WSP	Ampara	7,500	153	2,415	
	Sub Total 1		696,250	13,346	663,171	
Batch 2: New Projects to be implemented in year 2022-2023 with Pipe laying & other civil works						
	Western Central RSC		-	-	3,500	
89	Weliwita WSP - Transmission & other civil works	Colombo			-	
90	Upgarading Water Supply Facilities in Battaramulla Area	Colombo	N/A		3,500	
	Western North RSC	•		182	-	
91	Implementation of Greater Colombo System	Gampaha		182	-	
	Improvement Project for NRW Reduction &					
	Management Kelaniya System Improvement					
	Western South		-	-	-	
92	Multi Stakeholder Approach to Kaluganga Catchment	Kaluthara			-	
	Protection					
	Southern RSC			142	13,950	
93	Middeniya improvement WSP - Phase I	Hambanthot		142	13,950	
		а				
	Sub Total 2		-	324	17,450	
	TOTAL – Batch 2		696,250	13,671	680,621	
	TOTAL – Batch 1 & 2		1,269,250	24,750	1,569,005	

No.	Name of the Project	District	WTP Capacity(m3/d)	Total New Connections Domestic (Nos.)
	Western North RSC			
1	Mirigama WSP – Stage II	Gampaha	20,000	14,000
2	Divulapitiya WSP – Stage II	Gampaha	20,000	14,000
3	Katana WSP - Stage II	Gampaha	-	10,800
4	Kiridiwela WSP - Stage II	Gampaha	30,000	24,000
5	Mabima WSP - Stage I	Gampaha	180,000	200,000
	North Western RSC			
6	Towns North of Kurunegala WSP i) Water Balance and EIA study ii) Construction of Wadurapeenu Ella Reservoir iii) Towns North of Kurunegala WSP	Kurunegala		
7	Natthandiya Mahawewa IWSP	Puttalam	15,000	19,000
8	Weerambugedara WSP	Kurunegala	10,000	12,000
9	Town South Puttalam	Puttalam	15,000	19,000
10	Giriulla Dambadeniya Narammala WSP	Kurunegala	20,000	25,000
11	Kakapalliya WSP – Stage II	Puttalam	4,500	6,000
12	Karuwalagaswewa WSP	Puttalam	4,000	5,100
13	Polpitigama WSP	Kurunegala	5,000	6,000
	North Central RSC			
14	Eppawala,Rajanganaya, Nochchiyagama & Giribawa Integrated WSP	Anuradhapura	30,000	12,900
15	Greater Anuradhapura North & Greater Trincomalee Integrated WSP	Anuradhapura	15,000	12,900
16	Galenbindunuwewa WSP	Anuradhapura	9,000	3,857
17	Galnewa – Palagala WSP	Anuradhapura	13,500	19,284
	North RSC			
18	Greater Jaffna WSP (Pali Aru)	Jaffna	50,000	8,000
19	Greater Mannar WSP	Mannar	24,000	4,000
20	Mankulam WSP	Mullithivu	21,000	
21	Greater Vavuniya WSS	Vavuniya	32,000	
22	Greater Mullaithivu WSP	Mullaithivu	21,000	
	Central RSC		í í	
23	Kandy South water Service Improvement Project	Kandy	30,000	44,000
24	Greater Dambulla Water Supply Project - Stage II	Mathale	30,000	41,800
25	Southern RSC Middeniya Angukukolapalessa Long term	Hambanthota	15,000	12,600
26	Muruthawala Long Tarm WSD, Dhaga L & H	Hambanthata	20.000	7 000
20	Paddagagama IWSD Staga II	Galla	30,000	40,000
27	Baddegagama I w SP-Stage II	Galle	55,000	40,000
28	Hambanthota Industrial Zone	Hambanthota	55,000	-
20	Uva KSC Moreno WSD	Dedulle	2 000	4 200
29	Creater Amba academa WSD	Dadulla	3,000	4,200
21	Dieater Annoagasuowa w SF	Monorogala	20,000	20,750
31	Madulla WSP	Monaragala	25,000	38 520
32	Madagama WSD	Monaragala	23,000	16 050
33	Fact BSC	Monaragaia	10,000	10,050
24	Last KSC Dedivethelewe WSD	A	7.500	2 280
34	Fauryalilatawa w SP	Ampara	7,500	3,380
35	Pothuwil WSS	Ampara	4,000	2,200
36	Padavisipura WSP	Trincomalee	4,500	
37	Construction of intake at Allai Knathale and Laying raw water transmission main	Trincomalee		
38	Upgrading Kanthale WTP	Trincomalee	72,000	
39	Improvement of Kokkadichcholai WSS	Batticaloa		3,000
40	Batticaloa North WSP	Batticaloa	30,000	
41	Heda Oya Water Supply Project	Batticaloa		
42	Batticaloa West WSP	Batticaloa	25,000	
43	Batticaloa South WSP	Batticaloa	25,000	

ANNEX 5: New Water Supply Projects Proposed for Implementation beyond 2025

S#	Name of the Project	District	WWTP Capacity (m ³ /d)	Length of Pipe Laying (km)	Pumping Stations (Nos.)	New Connections Total (Nos.)
1	Jaffna City Sanitation Project	Jaffna	13,300	250	25	20,000
2	Hambantota Wastewater Disposal Project	Hambantota	12,000	142	12	9,035
3	Kattankudy Wastewater Disposal Project	Batticaloa	10,500	61	11	13,308
4	Dehiwala Mt. Lavinia Sewerage Project	Colombo	20,500	92	12	28,068
5	Sri Jayawardenepura Kotte Wastewater Disposal Project	Colombo	35,000	352	70	45,000
6	Jaela Ekala Wastewater Management Project Stage II	Gampaha	7,250	147	9	9,000
7	Coastal City Sanitation Project – Galle (AFD)	Galle	12,500	196	11	11,000
8	Coastal City Sanitation Project – Unawatuna (AFD)	Galle	4,600	44	5	2,050
9	Coastal City Sanitation Project – Kelaniya / Peliyagoda(AFD)	Gampaha	14,500	226	17	13,100
Total			130,150	1,510	172	150,561

ANNEX 6: New Sewerage Projects Proposed for Implementation in 2021-2025

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