ROADMAP TO RECOVERY OF THE WATER SECTOR IN LEBANON

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EXECUTIVE SUMMARY

Hyperinflation in Lebanon continued for the 30th consecutive month in December. The expenditures sored with the increase of the price of diesel, fuel and the rise of the exchange rate. Hence, the financial simulations previously conducted by the EU-AFD Water Reform Programme were revised based on the new figures and the recovery plan was hence updated accordingly.

It should be noted though that several decisions and reforms hinge on the formation of a new government, the election of a new president and consensus among the country's political elite.

The water & wastewater sector is currently facing various challenges at multiple levels and a serious budget deficit, which became alarming with the devaluation of the Lebanese pound. A combination of inadequate tariff, low collection and subscription rates, unpaid arrears, and high non-revenue water undermine the financial viability of the four water establishments and impair their ability to cover operation and maintenance expenditures to ensure basic service to citizens. Consequently, water establishments are unable to improve the service and extend its geographical coverage.

The current crisis in Lebanon and its implications on the salaries of public servants of the water establishments, which still lack sufficient specialized technical staff, exacerbate the ability of the WEs to even maintain normal functioning of their day-to-day operations.

Additionally, incomplete and outdated legal and institutional framework impedes optimal functioning of the institutions, where the implementation of existing laws does not respond to the real definition of commercial entities delivering state services.

Therefore, and in parallel to the national water and wastewater sector strategy, an urgent recovery plan targeting cost-recovery and key investments is an imminent need. It aims at breaking the vicious cycle of inadequate service-low collection and requires serious financial support and political commitment from the government of Lebanon, in coordination with the international community.

The recovery plan relies on 4 complementary axes:

1. Immediate and progressive financial measures achieved through (i) a gradual yearly tariff increase starting at around 0,89 MLBP in 2022 (equivalent to around 20 USD on adopted exchange rate[1]) up to 6,7 MLBP (equivalent to 150 USD on adopted exchange rate) in 2026, (ii) additional adjustment of the salaries of public servants, (iii) provision of financial support to WEs (by MoF and donors, in addition to own revenues from collection) for a period of 5 years until full cost recovery is achieved, (iv) validation of a settlement plan for the payment of wastewater arrears till end of 2022 (36 MUSD) and (v) coverage of financial gaps by the GoL while engaging in discussions with donors to contribute to the settlement of the remaining gap pertaining to consumables and maintenance.
2. Performance optimization to increase cost recovery achieved through a first set of technical and commercial improvements: (i) increase of collection and subscription (ii) decrease of NRW at national level by 15% in 2026 by removing illegal connections and improving networks, (iii) increase of the power generated from solar PV by 20% by 2024, (iv) use of shallow underground sources & surface water where feasible, (v) connecting pumping station and wastewater treatment plants to EDL main service lines (vi) installation of metering at water

[1] exchange rate adopted for financial simulations is equal to 45,000.00 LBP/1.00 USD

sources (vii) raising awareness through public outreach campaigns. Other needed improvements, detailed in the plan, address performance upgrade and cost optimization.

3. Institutional and legal reforms achieved mainly through: (i) approval of the water and wastewater sector national strategy, (ii) appointment of a monitoring committee to follow up on the drafting of application decrees and bylaws of the water law 192/2020, (iii) renewal of the boards of directors of the WEs based solely on skills and qualifications, (iv) exceptional hiring of specialized technical staff for wastewater management while assessing the possibility of redeployment of public servants, (v) adoption of the application decrees of the water law, (vii) approval of a transparent recruitment policy based on skills and qualifications and (vii) adoption of new organizational structure at WEs and MoEW.
4. Political support materialized through the commitment of the different political actors and public institutions to the best interest of the water sector, according to the national strategy and recovery plan. This support shall go beyond policy level and extend to ensuring security reinforcements of water establishments in removing illegal connections and securing the water and wastewater assets from theft or damage. It should imperatively extend as well to allow the water establishments to properly function as commercial entities.

The recovery plan is extended over 5 years, during which a series of performance improvements under best investment guidelines shall be able to change the paradigm into a reliable and cost-effective service to populations, with the aim of self-reliant water services in Lebanon. It shall be accompanied with targeted capacity building of the sector public actors.

1 CURRENT SITUATION

Since the surge of the Covid-19 pandemic, simultaneously with the financial crisis, additional economic hardships hinder the financial sustainability of the water and wastewater services while increasing the pressure on water establishments. Corresponding impacts vary between an increase in demand contributing to a lower service quality, a significant drop in collection rate and an incapability on the short and medium terms to maintain the operation and maintenance of the existing infrastructure.

More specifically, the water & wastewater sector is facing a double problem of inability to cover the O&M expenditures and a lack of technical capacities at the WEs. The current tariffs are inadequate, while collection and subscription rates are insufficient, contributing to a huge gap between expenses and revenues, resulting in the inability of Water establishments to cover O&M. At the level of capacities, unavailability of sufficient specialized technical and administrative staff, compounded with the devaluation of salaries and loss of existing competent staff, exacerbate the ability of the WEs to maintain normal functioning of their operations.

In reality, without the support of some donors for the procurement of fuel, diesel, consumables, and spare parts, even basic water supply services would had been severely impacted.

This paper draws the path towards a more stable and financially sound water sector in a 5-year management plan, based on a vision aiming at maintaining and improving the service to the citizens while building the technical and financial resilience of the WEs as well as the enabling legal and institutional setting.

This plan shall hence bridge the gap between the emergency actions needed to maintain the services and the longer-term improvements in parallel with the reforms.

2 MAIN CHALLENGES FACING THE WATER SECTOR

2.1 Commercial Challenges

In order to identify the commercial challenges pertaining to the water sector, the figures of 2019 (pre-crisis) were used to establish the baseline. These values were then simulated for the period 2022-2026 with the following input data in the table below. These simulations are made available by the EU-AFD Water Reform Programme.

Table 1: Input Data Used For Tariff Simulation As Per MoEW Recommendations (source: EU-AFD Water Reform Programme, 2022)

Indicator	Value in 2019	Values for the Simulations conducted in end 2021	Values for the Simulations conducted in end 2022
Exchange rate	1 500 LBP/$	20 000 LBP/$ (= sayrafa rate)	45 000 LBP/$ and sayrafa rate = 30,600 LBP/USD
Diesel cost	17 000 LBP/20 liters	394 000 LBP/liter	850 000 LBP/20 liters
Gasoline	25 000 LBP/20 liters	375 000 LBP/20 liters	717 000 LBP/20 liters
Transportation fee	8 000 LBP/day	64 000 LBP/day	95 000 LBP/day
Salary multiplier	1	2	3
EDL tariff for 1 kWh*	170 LBP (0.113 USD)	4 200 LBP (0.21 USD)	8 262 LBP @ Sayrafa rate (0.27 USD)
Consumer Price Index (CPI)	115	700	1 613
Including 11 WWTPs to be readily handed-over by the CDR to the WEs	No	Yes	Yes

2.1.1 Significant Negative Financial Balance

The weighted national tariff increase from an average of 330,000 LBP/m^3/yr to 890,000 LBP/m^3/yr in the beginning of 2022, was also accompanied by a more abrupt hyperinflation. The expenditures sored with the increase of the price of diesel, fuel and the rise of the exchange rate (as clearly shown in the table above).

Hence, even with an additional tariff increase in 2023 for a weighted national average of 3,600,000 LBP/m^3/yr the sector would still accumulate an additional total deficit of 76,5 Million USD (total OPEX estimated to 117 MUSD while revenues would average around 40,5 MUSD). These calculations are based on an exchange rate at 45,000 LBP/1USD and accommodate the foreseen increase of the electricity tariff. Consequently, the energy bill would be the highest share of the OPEX with an overall average of 77%, followed by the maintenance with an average of 12% of the total cost of the operations of a water utility in Lebanon.

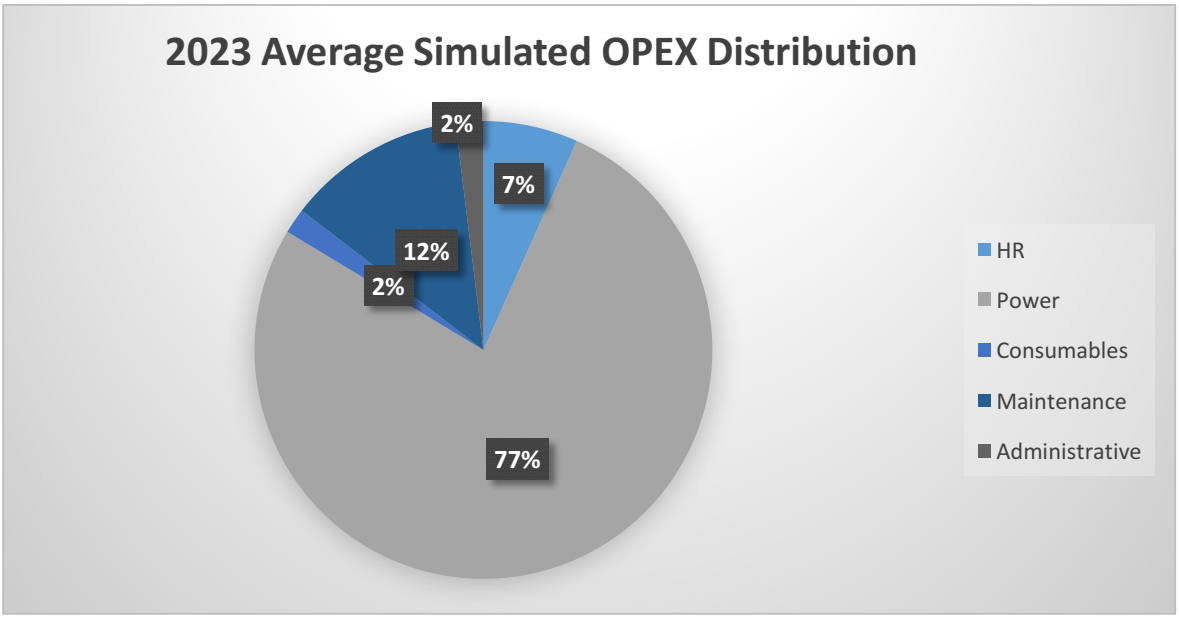

Figure 1: Average Distribution of Operational Expenditures in the 4 Regional Water Establishments
(source: EU-AFD TA Programme, 2022)

These expenditures are expected to upsurge furthermore with the increase of the price of diesel and the rise of the exchange rate if not maintained at 45.000 LBP for 1 USD.

Figures simulated today indicate a breakeven tariff, different for each WE, varying between 5.5 MLBP (equivalent to 122 USD on adopted exchange rate[2]) and 33 MLBP (equivalent to 733 USD on adopted exchange rate) as shown in table 2 below. Given that increasing the regional tariffs to breakeven would not be feasible in the current socio-economic context in Lebanon, a gradual increase is therefore recommended.

Table 2: Cost Recovery Simulation Per WE Showing Breakeven Tariffs
(source: EU-AFD Water Reform Programme, 2022)

	NLWE	BMLWE	SLWE	BWE
Annual tariff (2022)	**852 000 LBP**	**950 000 LBP**	**800 000 LBP**	**810 000 LBP**
Collection rate(2022)	51 %	57 %	40 %	18 %
Breakeven tariff (2023)	**8 500 000 LBP**	**5 500 000 LBP**	**33 000 000 LBP**	**17 000 000 LBP**

2.1.2 Insufficient Collection & Subscription Rates

The currently collected amounts of billed water in the four regions covered by the water establishments are well below satisfactory to cover their expenditures. Many users do not pay the annual tariff but are still illegitimately having access to water. Progress made throughout 2018 and

[2] exchange rate adopted for financial simulations is equal to 45,000.00 LBP/1.00 USD

2019 was rapidly met with a significant decline since the beginning of the financial crisis in 2020 and which shall be addressed as a matter of high priority.

Similarly, the number of subscribers to the water services with respect to the resident population is low in the four WEs, especially in the North and the Bekaa as shown in the table below.

Table 3: Collection and subscription rates per water establishment
(Source: EU-AFD TA Programme, 2022)

	NLWE	BMLWE	SLWE	BWE
Collection rate (2019)	51 %	69 %	54 %	46 %
Collection rate (2022)	51 %	57 %	40 %	18 %
Subscription rate (2019, relatively unchanged for 2022)	50 %	60 %	52 %	37 %

2.2 Financial Challenges

2.2.1 Arrears due to Operators of WWTPs

Private operators running wastewater treatments plants on behalf of the CDR have not been paid during the past 3 years due to lack of funds. Operators of several plants stopped operations as they are not able to afford paying fuel to run the plants and are bypassing the incoming flow directly into the sea, posing a high risk of serious health and environmental hazards, and affecting the touristic summer season on the coastal areas. As these plants are to be handed over to the already financially weak water establishments, arrears standing at around 36 Million USD, including the operation and maintenance fees for 2022, shall be first settled.

2.2.2 Lack of Money for Investments to Improve the Service

In the current financial context and the deficits incurred in the overall budget, the water establishments cannot invest in new or improved infrastructure to upgrade the service and extend its geographical coverage. The same applies at national level for key strategic infrastructure where the Ministry of Energy and Water cannot pursue investments.

2.3 Technical Challenges

2.3.1 Inability to Calculate the Cost of Delivered Cubic Meter

Most of the water sources in Lebanon are not monitored for water volumes and production capacities. In addition, no district metering neither consumption metering are applied downstream, rendering the allocation of the water resources a very hard exercise, and the calculation of the cost of water production, treatment and delivery to the users not feasible. While improving the service and achieving average cost-recovery can be achieved progressively in the absence of the possibility to accurately quantify volumes across the value chain and the corresponding costs, reaching constant sustainability would still require accurate cost knowledge and control.

2.3.2 High Share of Non-Revenue Water and Aging Infrastructure

In addition to the share of non-paying customers observed in the collection rates, an important portion is also attributed to illegal connections to the water networks and the leakages of the old or damaged infrastructure. Moreover, a significant portion of the existing infrastructure is now aged, resulting in lower efficiency.

2.4 Human Resources and Organizational Challenges

Almost two decades after their creation, the Regional Water Establishments still lack many key expertise and capacities and are incapable of restructuring their organigrams. This situation is mainly due to their inability to hire and fire their staff despite their autonomous status as well as the limiting budget constraints justified by very low revenues. Consequently, the WEs suffer from a considerable lack of expertise in many areas such as wastewater management, operation and maintenance, digitalization, water quality, etc. With the severe financial and economic crisis and the devaluation of the national currency leading to the loss of purchasing power of the existing employees at the Wes and even with the current salary increase, managing the daily operations with demotivated staff exacerbates the performance of operators and as well as the quality of the water and wastewater services.

2.5 Contractual and Procurement Challenges

2.5.1 Handing over the Wastewater Treatments Plants to the Water Establishments

Most of the operational wastewater treatment plants are managed by private operators contracted by the CDR, with fewer managed by the WEs and even less by some municipalities. These plants are to be handed-over to the WEs as the legal owners (upon law 221 of 2000). However, the establishments do not have the necessary technical, organizational and financial capacities to support these facilities, especially in the current economic and financial crises Lebanon is facing and due to the absence of proper wastewater tariff.

2.5.2 Lack of Adequate Contractual Modalities Between the Public and the Private Sector

To date, the contractual relationship between the public and the private sector has been limited to basic contractual frameworks with no oversight on performance. This situation left the client and the service provider in an unstructured relationship with regard to the service itself. This is particularly the case of wastewater treatment plants operated by private entities, where the quality of the influent and that of the effluent, and therefore the performance in terms of protection of natural resources and that of public health, are not properly taken into account. Several efforts were made by MoEW to formalize performance based contracting frameworks which still need to be finalized and adopted by all stakeholders with clear distribution of roles and responsibilities.

2.6 Legal and Institutional Challenges

2.6.1 Applicability of the Water Law

Despite the previous attempts to reform the water sector in Lebanon, many deficiencies still hamper its efficient and accountable governance, where the different dimensions of the sector and the ramified extent of impacts on other vital sectors such as health, agriculture, environment and industry still require clear distribution of roles and responsibilities. In fact, the new water law 192/2020

approved initially in 2018 (n°77) still lacks application decrees and provisions to enact the improvements brought to the sector.

2.6.2 Insufficient Autonomy of WEs to Assume the Role of Commercial Utilities

By law, the Water Establishments are defined as legally and financially autonomous public institutions. Whereas this autonomy is dictated by the texts, it remains very theoretical with respect to the definition of a commercial entity, which delivers a paid service to the residents and is valued as the sum of its assets and performance in service delivery. Water establishments are bound to hire through the Civil Service Council where the recruitment of new employees has been frozen. Moreover, WE's are exposed to political pressure and interventions at many levels, and do not obtain the needed political and security support when it comes to illegal connections and non-paying customers or even polluters, moving them further away from implementing sustainable commercial objectives. These public service providers see themselves stuck within a spiteful equation where service improvement and rule of law is extremely problematic, rendering the other two variables of trust and financial recovery tremendously farfetched.

2.6.3 Ambiguity in the Role of Municipalities and the Public-Public Partnership

When it comes to Water Establishments and Municipalities, legal texts show many contradictions and duplications that need to be addressed properly within the application decrees and provisions of the new water law. This reform constitutes a unique opportunity to establish a sound framework of collaboration between the local authorities and the public utilities and implement the public-public partnership model in the water sector. The most imminent example is the wastewater sector, where a clear identification of the roles and responsibilities of the municipalities and the water establishments (over networks and plants) is crucial and most urgently needed.

Lebanon's water sector would not be able to recover without a rescue plan addressing the challenges with concrete actions, which start first and foremost with credible decisions and commitments of the Government of Lebanon. Surely, many accompanying measures are crucial to enable technical, institutional and financial improvements with the help and support of the donors' community. Therefore, a set of corrective decisions and good practices is presented below in an attempt to reach good governance, cost recovery and a resilient water sector within 5 years.

3 PROPOSED PLAN

The success of the water sector in Lebanon relies mainly on its ability to break the vicious cycle of inadequate service and low cost recovery. Many accompanying measures are key to the success of this plan and require political engagement in the necessary reforms.

Therefore, the plan relies on 4 complementary axes:

1. Immediate and progressive financial measures achieved through a gradual tariff increase and financial support from others, where needed
2. Performance optimization to increase cost recovery achieved through technical and commercial improvements
3. Institutional and legal reforms achieved through implementation of a set of corrective measures
4. Political support as key success factor accompanying the recovery plan

The plan requires several initiatives to be implemented on the short and medium terms to maintain and possibly improve water and wastewater services to citizens.

3.1 Axis 1: Immediate & Progressive Financial Measures

3.1.1 Tariff Increase

- Increase in revenues of the WEs through a gradual yearly raise in tariff starting at starting at around 0,89 MLBP in 2022 (equivalent to around 20 USD on adopted exchange rate) up to 6,7 MLBP (equivalent to 150 USD on adopted exchange rate) in 2026. These numbers shall be updated frequently and reported yearly to accommodate changes in the exchange rate and therefore adapt the annual tariff accordingly. *This increase shall be accompanied with an improvement of the collection and subscription rates addressed in the commercial actions.*

Table 4: Proposed Tariff Increase
(Source: EU-AFD TA Programme, 2022)

	2019	2022	2023	2024	2025	2026
Tariff	*220 USD (330 k LBP)*	*20 USD (890 k LBP)*	*80 USD (3.6 M LBP)*	*100 USD (4.5 M LBP)*	*120 USD (5.4 MLBP)*	*150 USD (6,7 MLBP)*

3.1.2 Re-adjustment of Salaries

- Re-adjustment of the salaries of public servants in the water sector is a key priority to re-engage them in their daily functions. This shall be applied until the WEs have a well-defined wage policy.

3.1.3 Deficit Coverage

- Since the increase in the annual tariff would still result in negative financial balance until full recovery is attained in 2026, the following commitments have to be made:
  - ⇨ The Government of Lebanon commits to providing the necessary financial support to the Water Establishments on a yearly basis, as deemed necessary and feasible.
  - ⇨ The Water establishments commit to covering other expenses (such as HR, part of the maintenance and a share of power) during a period of 5 years, renewed yearly as feasible.
  - ⇨ The Government of Lebanon engages in discussions with donors to cover part of the remaining expenses (such as part of the maintenance including spare parts as well as consumables) and the wastewater treatment.
  - ⇨ The Government of Lebanon commits to paying the arrears to the private operators of the wastewater treatment plants as well as the fees covering the remaining of 2022. These payments are estimated at 36 MUSD.

Table 5 : Financial and Commercial Plan 2022 - 2026 (Source: MoEW, 2022)

Year	Average Annual Weighted Tariff (USD)	Average Annual Weighted Tariff (lbp/m3/yr)	Consolidated Subscription rate	Consolidated Collection rate	Revenues (MUSD)	OPEX (MUSD)	Deficit (MUSD)
2019	220	330,000 (Baseline Scenario)	55%	62%	103	137	41 [(1)]
2022	20 [(2)]	890,000	55%	50%	12	88 [(2)]	76
2023	80	3,600,000	59%	56%	41	117 [(3)]	76
2024	100	4,500,000	63%	64%	56	117	61
2025	120	5,400,000	66%	72%	72	117	45
2026	150	6,700,000	70%	80%	95	117	22 [(4)]

(1) *The deficit is not the difference between revenues and Opex in this case, since BMLWE has a positive financial balance of 7.22 MUSD*

(2) *Given electricity (EDL) tariff unchanged for 2022 and an average exchange rate of 35,000 USD*

(3) *Given electricity (EDL) tariff at 0.27 USD/kwh at adopted sayrafa exchange rate*

(4) *The deficit is not the difference between revenues and Opex in this case, since it is expected that BMLWE and NLWE would have a positive financial balance. The deficit remaining in 2026 is therefore only for SLWE and BWE. However, this do not take into account the power generated from solar PV and that affects the OPEX, additional assessment shall hence be made at a national level to estimate the impact of such interventions on the total expenditures incurred in each WE.,*

3.2 Axis 2: Performance Optimization for Cost Recovery

3.2.1 Technical Improvements through Strategic Key Investments

- Optimization of operational expenditures by reducing power usage through the following measures:
  - ⇨ Increase the power generated from solar PV by an overall of 20% over 2 years (2023 and 2024)
  - ⇨ Favor pumping from shallow underground sources and the use of surface water where feasible
  - ⇨ Prioritize rehabilitation of energy inefficient or low-efficiency systems over new investments (such as replacement of equipment)
  - ⇨ Assess hydropower potential of existing systems and implement where feasible
- Reduction of NRW by 15% by 2026 through the following measures:
  - ⇨ Prioritize investments in reduction of leakages from networks and installation of district metering
  - ⇨ Reduce illegal connections
- Management of water production through the following measures:
  - ⇨ Prioritize investments in installation of metering at water sources and along water systems
  - ⇨ Set up a centralized data center and implement data transmission and storage
- Implementation of pilot volumetric tariffs for water in fully metered areas
- Ensuring continuous monitoring of water quality and prioritizing treatment through financing of consumables and rehabilitation works where necessary
- Prioritizing the rehabilitation of existing infrastructure and the completion of small to medium unfinished systems with high impact on service continuity
- Modernization, digitalization and automation of the WEs operations (fully or partially in a gradual manner ex: accounting and cost centers)
- Implementation of a data center at the MoEW where information are centralized, treated and made public
- Engagement and deployment of a national approach to sludge treatment and usage

It shall be noted that a common approach to all interventions in the sector shall be adopted for the identification phase and throughout the appraisal phase. Acknowledging that right to access public water services should be guaranteed to all residents, projects shall be identified and appraised in close coordination with the water establishments. Projects that yield the highest social and economic returns shall be prioritized. Therefore, all new projects and/or interventions for the water and wastewater sector shall account for:

- Return on investment (RoI) with specific focus on O&M cost vs. revenues
- Energy sources and energy cost with a detailed analysis of alternatives
- Staff and expertise needed for O&M
- Minimum components where applicable
  - ⇨ Customer database
  - ⇨ DMAs
  - ⇨ Source Metering

- ⇨ Users connection

3.2.2 Commercial Improvements

- Increase of subscription rate to reach 70% by 2026 (progressive yearly increase), with a series of measures:
  - ⇨ Communication campaigns
  - ⇨ Political support for the removal of illegal connections
- Increase of collection rate to reach 80% by 2026 (progressive yearly increase), with a series of measures:
  - ⇨ Communication campaigns with the help of donors
  - ⇨ Political support to water establishments to encourage payment of fees
  - ⇨ Engage with municipalities within a public-public partnership

With the financial interventions and the commercial improvements mentioned above, the sector shall be able to recover within a span of 5 years (2022-2026) as shown in the graph below:

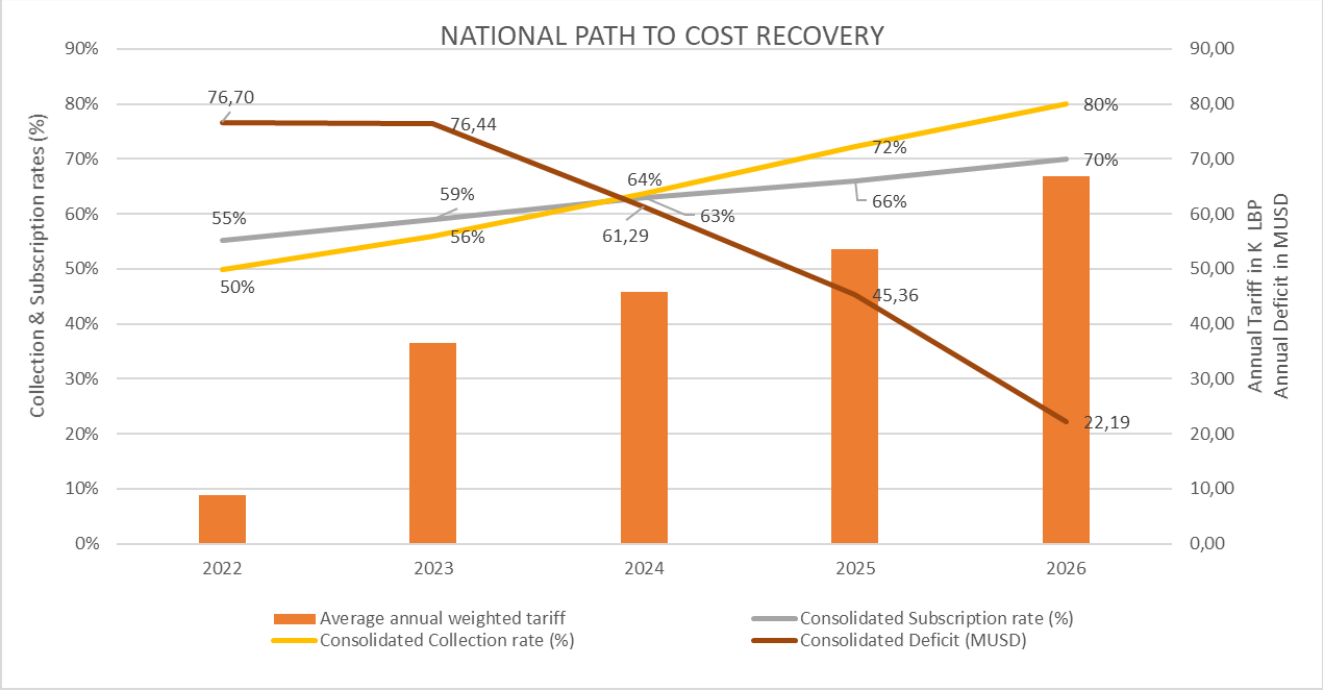

Figure 2: Cost Recovery Simulation With Corresponding Financial Interventions And Commercial Improvements (source: EU-AFD Water Reform Programme, 2022)

3.3 AXIS 3: LEGAL & INSTITUTIONAL REFORMS

3.3.1 Organizational Structure at WEs

- Improvement of the organizational structure through the following actions:
  - ⇨ Approve the new organizational charts of the WEs in light of the recommendations issued by the experts (adopt new structure in light of today's challenges, WEs business plans and the orientations of the new water law) and approve the corresponding revision of decrees № 14913 to 14916 dated 5/7/2005 by July 2023.

- ⇨ Allow exceptionally the WEs to hire a limited number of specialized technical staff for wastewater management while assessing the possibility of redeployment of public servants by April 2023.
- ⇨ Approve a transparent recruitment policy based on skills and qualifications and a new salary grid by January 2024.
- ⇨ Implement targeted capacity building for the administrative and technical staff.

3.3.2 Legal & Institutional

- Appointment of a monitoring committee to follow up on the drafting and approval of application decrees and bylaws of the water law 192/2020. This committee has been appointed on the 23rd of November 2022.
- Adoption of the application decrees and provisions of the new water law 192/2020 to enact the reforms and remove ambiguities and according to the identified priorities (priority 1 by July 2023, priority 2 by June 2024, priority 3 by June 2025)
- Adoption of a public-public partnership model between municipalities and water establishments customized on a case by case basis with clear distribution of roles and responsibilities for both water and wastewater systems at financial and technical levels.
- Adoption of a public-private partnership model between the private sector and water establishments based on clear performance obligations while improving contractual and monitoring capabilities at WEs.
- Renewal of the board of directors of the water establishments based solely on skills and qualifications by March 2023.
- Empowerment of the WEs to reach effective administrative and financial autonomy as per their legal mandate according to laws 221/2000 and 192/2020 by establishing a new wage policy and salary grids and approving new tutelage relationship between the MoEW and the WEs, specifically on performance indicators, procurement, and financial reporting.
- Improvement of the monitoring framework of the WEs at central level (performance monitoring of the WEs through KPIs, etc.).
- Establishment and adoption of regional master plans and business plans at WEs in line with the national strategy by July 2023.
- Adoption of the water and wastewater sector national strategy by July 2023.

3.4 Axis 4: Political Support

No matter the attempts to reform the sector and empower its service providers, no achievement can be made without consistent, coherent and persistent political will. It is therefore crucial that the Government of Lebanon and the political parties provide full political support to this action plan and allow the water establishments to fulfill their full mandate for the ultimate satisfaction of the citizens. This support shall go beyond the policy level in supporting the reforms and extend to ensuring the enabling environment for the implementation of proposed measures on the ground, also with the support of municipalities and security forces.

Table 6: Proposed Timeframe for the Sector Recovery Measure (source: EU-AFD Water Reform, 2022

		Short-term				Medium-term							
Axis of intervention	Action	2022		2023		2024		2025		2026		Priority	Action Lead	Involved Stakeholders
		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2			
IMMEDIATE & PROGRESSIVE FINANCIAL MEASURES	Gradual yearly increase of tariff											1	WE + MoEW	N/A
	Validation of a settlement plan for the payment of WW arrears till end of 2022											1	GoL (MoEW + MoF)	N/A
	Coverage of financial gaps by the GoL & the donors until cost recovery											1	GoL + donors	WE
	Provide electricity from public lines to Water establishments at a highly subsidized price											1	GoL (MoEW + MoF)	WE
	Additional adjustment of the salaries of public servants by the GoL											1	GoL	MoEW + WE
PERFORMANCE OPTIMIZATION FOR COST RECOVERY	Increase of the consolidated subscription rate at national level starting at 55% in 2022 up to 70% in 2026											1	WE	MoEW + donors
	Increase of the consolidated collection rate at national level starting at 62% in 2022 up to 80% in 2026											1	WE	MoEW + donors
	Decrease of NRW at national level by 15% in 2026 by removing illegal connections and improving networks											1	WE	MoEW + donors
	Increase of the power generated from solar PV by 20% to optimise the operational cost											1	WE	MoEW + donors
	Using shallow underground sources & surface water											1	WE	MoEW + donors
	Rehabilitation of energy inefficient or low-efficiency systems											2	WE	MoEW + donors
	Assessment of hydropower potential of existing systems and implementation											3	WE	MoEW + donors
	Installation of metering at water sources											1	WE + MoEW	Donors
	Setting up of a centralized data center											2	MoEW	Donors
	Implementation of pilot volumetric tariffs for water in fully metered areas											2	WE	MoEW
	Maintain water quality and treatment as priority											2	WE + donors	MoEW
	Rehabilitation of existing aging and defectuous key infrastructure for better efficiency											2	WE + donors	MoEW
	Completion of small to medium unfinished systems with high impact on service continuity											2	WE + donors	MoEW
	Modernization / digitalization and automation of the WEs operations											3	WE + donors	MoEW
	Engagement and deployment of a national approach to sludge treatment and reuse											2	MoEW + WE + MoA + M	Donors
	Implementation of pilot areas (metering, pressure management, DMAs, customer database)											3	WE + donors	MoEW
	Awareness raising through public outreach campaigns											1	WE + donors	MoEW
LEGAL & INSTITUTIONAL REFORMS	Approval of the updated national water sector strategy 2020											1	CoM	MoEW
	Adoption of new organizational structure at WEs and MoEW											1	MoEW + WE	N/A
	Implementation of targeted capacity building for the administrative and technical staff											2	Donors	MoEW + WE
	Exceptionally hire WW technical staff at WEs											1	CoM + MoEW + WE	N/A
	Adoption of a transparent recruitment policy based on skills and qualifications along with a new salary grid											1	WE	MoEW
	Appointment of a monitoring committee for water law decrees											1	MoEW	N/A
	Adoption of the application decrees of the water law											1	CoM	MoEW
	Adoption of a public-public partnership model between municipalities and water establishments											2	MoEW + WE + MoIM	N/A
	Adoption of a public-private partnership model between the private sector and water establishments											2	MoEW + WE	N/A
	Renewal of the board of directors of the water establishments											1	MoEW + CoM	WE
	Establishing a new wage policy and salary grids											1	MoEW	N/A
	Adoption of new monitoring framework / tutelage											1	MoEW + WE	N/A
	Adoption of regional master plans and business plans where needed											1	WE	MoEW
POLITICAL SUPPORT	Political support to this action plan											1	GoL + Political Parties	MoEW + WE

Remarks :

1- *The cost and details of the above activities require further assessments, some of which are already being undertaken by stakeholders while others will need funding.*

2- *Working groups based on areas of intervention and interest of participants can be formed to follow up on the timely implementation of these activities.*

4 SUCCESS FACTORS

- Water Establishments should be committed to reach their performance targets within the proposed timeline;
- Political empowerment, support and security support on the ground should be given by all political parties and the Council of Ministers to achieve the mandatory improvements;
- Arrears and budget gaps should be paid by the Government of Lebanon in a timely manner;
- Deficit should be covered over the upcoming 5 years to bridge the cost-revenue gap and ensure proper service continuity;
- Specialized technical staff should imperatively be recruited at the WEs mainly for the wastewater sector;
- Donors should be engaged in supporting clear financial measures and the optimization of performance to achieve cost recovery.

5 SUMMARY TABLE OF TOP PRIORITY COMMITMENTS OF THE GOVERNMENT OF LEBANON AND TIMEFRAME

Commitments Description	Timeframe
Approve the Updated National Water Sector Strategy 2020	07/2023
Re-adjust salaries of public servants	06/2023
Engage in discussions with donors to cover part of the budget deficit	06/2023 06/2024 06/2025
Provide financial support on a yearly basis to partially cover the deficit, as necessary and feasible	12/2023 12/2024 12/2025
Validate a settlement plan for the arrears to private operators of wastewater treatment plants till end of 2022 (36MUSD)	03/2023
Increase the water tariff yearly	12/2022 12/2023 12/2024 12/2025
Renew the boards of directors of the water establishments based solely on skills and qualifications	03/2023
Approve new organizational structures at WEs	07/2023
Adopt the application decrees of the new water law 192/2020 according to the identified priorities	P1- 07/2023 P2- 06/2024 P3- 06/2025
Provide political and security support to reduce illegal connections	01/2023
Protect water and wastewater assets from theft or damage	01/2023
Allow exceptionally the WEs to hire a limited number of specialized technical staff for wastewater management	04/2023
Establishing a new wage policy and salary grids	01/2024

6 SUMMARY TABLE OF TOP PRIORITY ENGAGEMENTS / ACTIONS TO BE MADE BY THE WE AND THE MOEW WITH THE SUPPORT OF DONORS

Commitment description	Targets & Timeframe
Increase subscription rate at national level starting at 55% in 2022 up to 70% in 2026	59 % by 01/2023 70 % by 01/2026
Increase collection rate at national level starting at 62% in 2022 up to 80% in 2026	56 % by 01/2023 80 % by 01/2026
Decrease NRW at national level by 15% in 2026 by removing illegal connections and improving networks	5 % by 01/2024, 5 % by 01/2025 5 % by 01/2026
Increase power generated from solar PV by 20% to optimize the operational cost	10 % by 12/2023, 10% by 12/2024
Facilitate connection of pumping stations and wastewater treatment plants to service lines	04/2023
Use shallow underground sources & surface water	S1 (2022) ➔ S2 (2025)
Install bulk meters at water sources	S2 (2023) ➔ S2 (2025)
Awareness raising through public outreach campaigns	S1 (2023) ➔ S2 (2025)
Appoint a monitoring committee to follow up on the drafting of application decrees and bylaws of the water law 192/2020	It was appointed on the 23rd of November 2022
Adopt a transparent recruitment policy based on skills and qualifications along with a new salary grid	01/2024
Adopt regional master plans and business plans where needed	07/2023
Adopt new tutelage relationship between the MoEW and the WEs	06/2023