



Resilience - Oriented Indicators Overview

Yemen Water Sector Performance Indicators
of The Water and Sanitation Local Corporations (LCs) in
Aden, Sana'a, Ibb, Taiz and Hodeidah

2nd Quarter

April – June 2018





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1 Overview

The already critical supply water situation has been greatly exacerbated since 2015 by the conflict and its escalation. The Water and Sanitation Local Corporations (LCs) encountered difficulties in maintaining adequate operation and maintenance to provide the residents with a reliable water and sanitation services. Network rehabilitation and extension projects funded by the government and/or donor organizations have been suspended or terminated completely due to the prolonged conflict. Eventually, and considering the urban expansion associated with rapid population growth, this has left the majority of the populations without connection to the public services.

The ability of the LCs to provide acceptable services depends on a wide range of factors, such as adequate infrastructure, access to energy and consumables, qualified personnel, efficient financial and performance-oriented management. Likewise. The current situation encountered by the LCs proved that fragility and conflict can be extremely disruptive to these interrelated elements, and how the quality of service delivery could be degraded to a point of no return by a “vicious cycle” of insufficient financial and operational resources, aging and depreciation of assets, and in due course, leads to interrupted water supplies, customers’ dissatisfaction with the services they receive, and low revenue collection due to their unwillingness to pay for those services, which sooner or later, undermines the resilience and sustainability of the service delivery.

One of the utmost consequences of poor sanitation and low access to clean drinking water, has had catastrophic health effects by forcing the vast majority of the urban population to rely on unregulated and hazardous water supply alternatives, making them susceptible to water-borne diseases such as diarrhoea and the Endemic Cholera. Thus, the number of suspected cholera cases has been monitored regularly since the outbreak in 2016, and according to recent statistics from the Emergency Operation Centre¹ (WHO), between April and June 2018, approximately 28,400 of suspected cholera cases have been reported.

The cholera outbreak, on the other hand, has placed a burden on the social responsibility and mandate of the LCs. Thus, in order to confront and mitigate further pervasiveness and severity of Cholera, the LCs had appealed the international humanitarian agencies to act promptly and support them with fuel and/or alternative energy sources to secure the continuity of the services, even at the minimum level, to provide safe drinking water and hygienic disposal of wastewater in the affected areas.

Last but not least, despite the harsh conditions and challenges, the determination and dedication of the LCs’ staff were indispensable in maintaining the continuity of the service provision in view of the available possibilities. Furthermore, effective emergency measures embarked by the Relief and Donor organizations contributed to strengthening the capacity of the LCs in critical operational aspects.



1. Emergency Operation Centre (WHO) (<http://yemeneoc.org/bi/>)

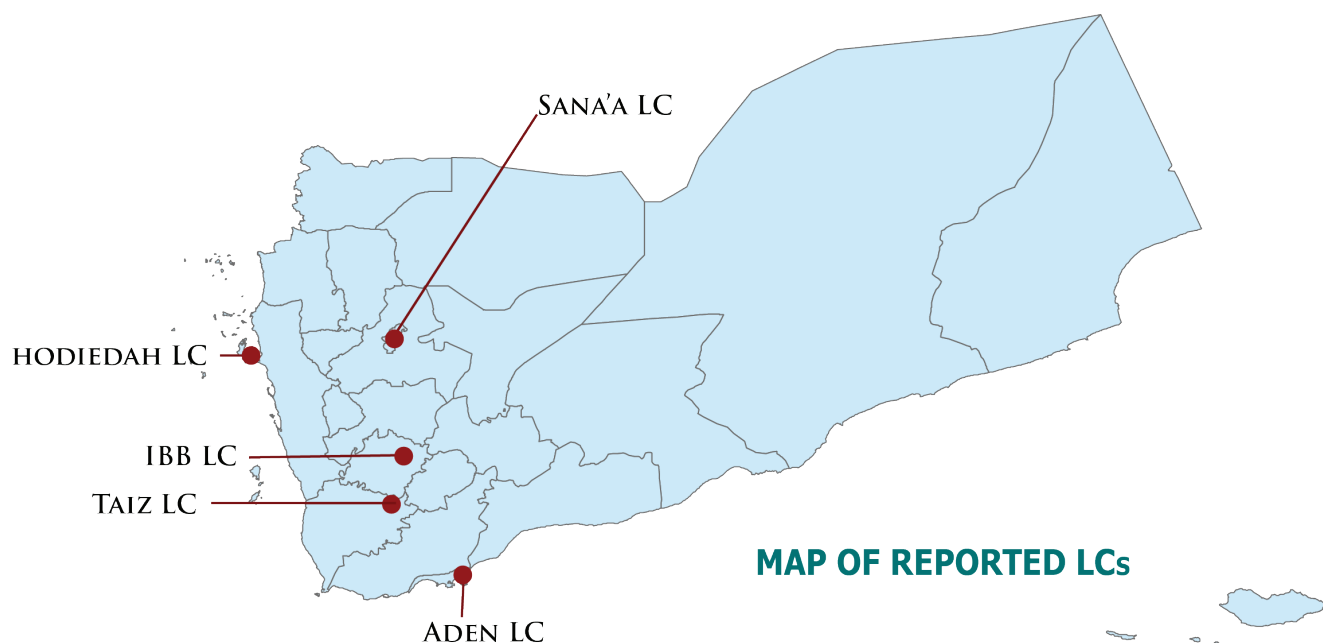
2 Reporting Methodology

Since the conflict erupted in Yemen in March 2015, the Ministry of Water and Environment 'MWE' with the assistance of the GIZ Water Sector Program 'GIZ IDWS', has initiated a process to monitor and report key performance indicators of selected LCs serving in metropolitan cities of Sana'a, Aden, Taiz, Hodeidah and Ibb.

The periodicity of reporting takes place on a quarterly basis for twenty-three resilience-oriented performance indicators to assist the Ministry of Water and Environment and other Water Sector Stakeholders to address the real and potential trends of performance with respect to the operational, financial and managerial resilience of the LCs during the consequences of the crises. It also constitutes a

useful reference for effective identification and/or assessing the impact of relevant sector interventions.

This report is covering the period from April to June 2018 accompanied by a brief technical analysis for these key performance indicators according to the specific context of each reported LC. The reporting exercise should not be seen as an independent assessment by GIZ IDWS solely. The assessment was undertaken with data submitted and signed by the LCs' management through appointed focal points. The GIZ IDWS team has made every effort to improve data quality by means of validation, analysis, correction, and subsequently, shared with the LCs for further clarification and/or revision.





3 Emergency Water Sector Performance Indicators

The LCs' performance is inextricably bonded to water coverage and reliability, the operating and maintenance capacity, the conditions of the production and distribution infrastructure and the viability of the financial system. This report measures the resilience of the LCs within the following category of key performance indicators:

a. Service Coverage of Piped Water Supply	<ol style="list-style-type: none"> 1. No. of population of urban centers (capita). 2. Number of IDPs in served area (capita). 3. Number of population served through water supply network (capita). 4. Water supply service coverage = population served through water supply network vs total population (%).
b. Service Days	<ol style="list-style-type: none"> 5. Number of service days of piped water supply per month.
c. Storage Capacity and Production	<ol style="list-style-type: none"> 6. Storage capacity (m³). 7. Storage capacity (l/capita). 8. Total quantity of water pumped in the network (m³ /month). 9. Per capita quantity of water pumped in the network (l/capita/day).
d. Energy Cost	<ol style="list-style-type: none"> 10. Energy Cost per m³ of water produced (YER/m³).
e. Performance of Pumps and Generators	<ol style="list-style-type: none"> 11. Number of main pumps for the water supply system. 12. Number of functional water pumps in service. 13. Number of main functional pump failures due to technical reasons (-/month). 14. Number of working hours of all operating pumps that pump water (hour/month). 15. Number of working generators in the operation of pumps. 16. Number of working hours of all operating generators used to run the functional pumps that pump water (hour/month).
f. Financial Viability	<ol style="list-style-type: none"> 17. Collected revenues (YER/month). 18. Billed amount (YER/month). 19. Total operational costs (YER/month). 20. Collected revenues vs billed amount (%). 21. Actual operational cost coverage (%). 22. Monthly governmental subsidies (YER). 23. Percentage of basic monthly salaries paid (%).

4 Technical Analysis

a. Service Coverage of Piped Water Supply

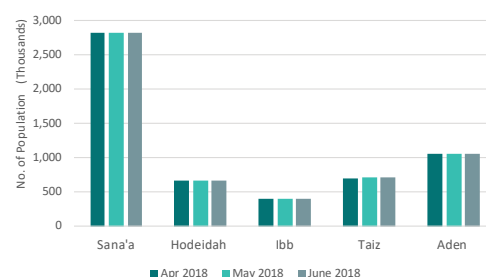
This quarter's water coverage varies from LC to LC mainly to population growth, efficiency in operations and network extensions, hence, 3 out of 5 LCs have a service coverage rate above 70%, while it is below 50% in others such as Sana'a (34%) and Taiz (25%).

Indeed, being connected does not always implying that water for a reliable and frequent supply is guaranteed. Due to power supply interruptions, operational failures and deteriorated/damaged networks, the LCs cannot provide adequate water to the connected population. They have attempted to overcome the dilemma of frequent and/or permanent power failure by installing an increased number of power generators for the operation of the pumping stations. However, the severe fuel shortage (combined with a lack of financing) has caused enormous deficiencies in water production and supply.

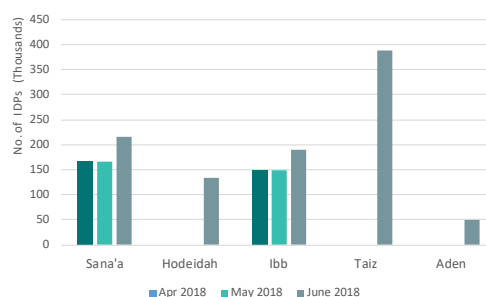
At the same time, the private sector is perceived as a major source of alternative water supplies covering other urban population that is not connected or seriously lacking access to public water supply. As a matter of fact, the calculated water tariff charged by the LCs is approximately 3 to 4 times lower on average than the prices charged by the private suppliers.

Furthermore, the massive influx of IDPs seeking secure areas and shelter had to a large extent compounded the burden of these LCs to properly comply with the humanitarian assistance efforts. As at the beginning of June 2018, a new loop of armed conflict commenced in Hodeidah City, causing an additional 305,940 internal displacements to flee mainly within Hodeidah safe districts, as well as the cities of Sana'a, Aden and Ibb, summing up to 977,172 IDP in these areas. To bridge the gap in the acute lack of water supply, most relevant humanitarian actors have set up a number of water distribution points in most IDPs camps alongside urgent assistance provided to the LCs to mitigate further hardships for the host communities.

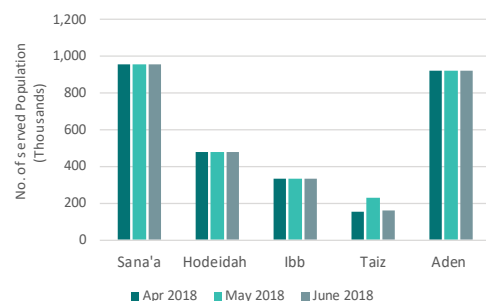
1. Number of population of urban centers (capita)



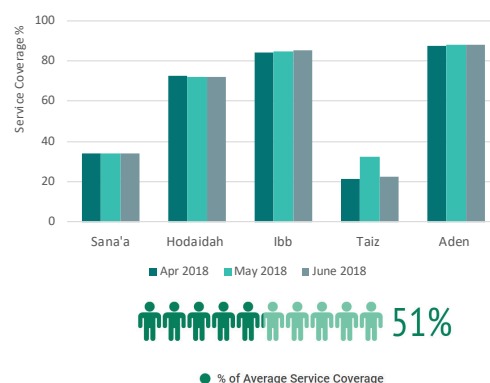
2. Number of IDPs in served area (capita)²



3. Number of population served through water supply network (capita)



4. Water supply service coverage = population served through water supply network vs. total population (%)



b. Service Days

In this quarter, the supply frequency by Sana'a LC remained the shortest, but nevertheless showed a glimmer of improvement by twice a month. Thanks to UNICEF, which has constantly provided the LC with adequate diesel rations to operate the pumping plants. Whereas Taiz LC, the other half of the tragedy, was involved in the same context in targeted support by the humanitarian communities. By 2018, the LC exhibited a real momentum to break hibernation and resume water supply within the limited geographic service range of the LC (Al Hawban district) to serve on average 5 days/month in this quarter.

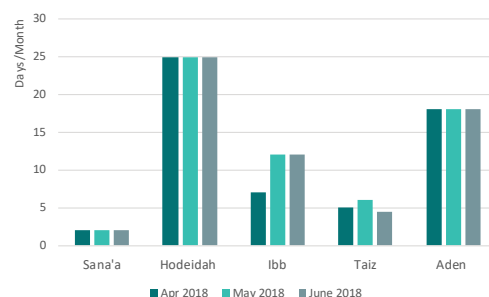
In the coastal areas, Aden & Hodeidah LCs reached the highest peak of the supply rate with a shared average 20 days per month. As a point of fact, Hodeidah LC still gives priority to obtain diesel over other operating costs to maintain the service. Whereas Aden LC is utilizing the availability of the National Power Network for increasing water production and distribution. In the same record, Ibb LC is the success story of a well-managed /functional institution, and was able to soar water supplies in this quarter from 7 to 12 days a month.

The policy of rationing the distribution of water varied among the LCs and is controlled by specific contextual factors. The data provided by the LCs, unfortunately, complicated the further analysis of the equity of water supply and distribution. Nevertheless, direct observations at least revealed that not all customers are receiving fair services in certain areas, and this can be primarily regarded to technical and economic factors, two of which:

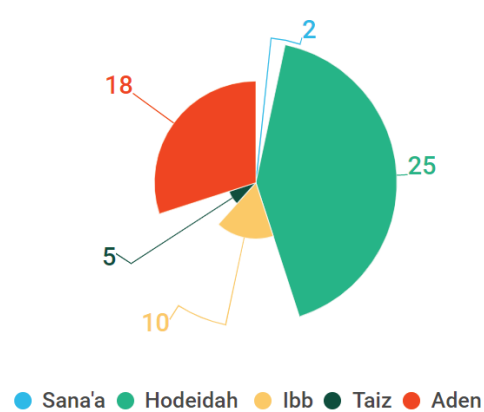
- The weakness of the network pressure that compromises fair distribution for those at the far end of the main pipeline. The same dilemma finds itself in mountainous towns.
- In perspective of the urgent need to collect operational revenues, water supplies are often scheduled to zones and neighbourhoods accommodated with high-income customers.

The frequency of supply is an indicator interlinked with other operational and financial performance of the LCs, and alarming for a potential damage to the physical network and its components. In addition, it also assists to extrapolate to which extent poor supply could directly contribute to public health concerns as well as measuring the impact of relevant provided humanitarian assistance to the LCs.

5. Number of service days of piped water supply per month



Average no. of service days per month



c. Storage Capacity and Production

The efficiency of water production is expressed as a total monthly water supplied to the network and the average daily share per person. In contrast, amounts of water consumption depend on the water resources and storage capacity vis-a-vis the proportional correlation between the frequency/quantity of water pumped through the network and the availability of electricity/fuel.

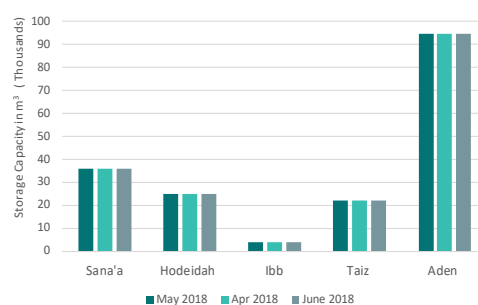
The water storage capacity in the LCs of Sana'a, Hodeidah, Ibb and Aden is serving respectively 38, 50, 12, and 103 l/capita/month. Similarly, the storage capacity by Taiz LC has been expanded from 71 to 124 l/capita to meet dire demands of the city's water supply.

With respect to the water production, in Sana'a city and in spite of the apparent improvement in some areas served by the LC. The results showed an increase in water production and per capita share compared with the First Quarter from 21 to 29 l/capita/day on average. The water production in LC Hodeidah is still steady at almost 74 l / capita per day, maintaining an acceptable curve of the essential demand for water.

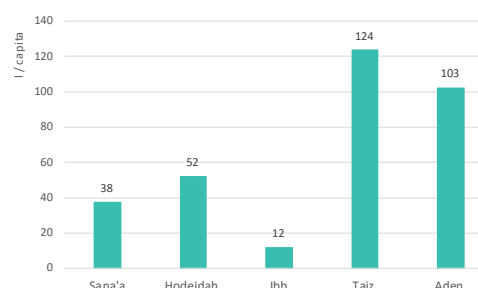
Whilst in Ibb LC and added to the frequent displacement of people in the city, the LC was challenged to maintain the continuity of water production in light of the low storage capacity. The average per capita water shares, therefore, remained steady at 52 l/day.

Due to the exclusive support in the provision of fuel subsidies, Taiz LC was able to pump an average of 96,734 m³ of water in this quarter with water shares per capita 20 l/day compared to 13 l/day in the First Quarter. As for Aden LC, this quarter reported a slight variation in water production with remarkable efficiency on May 2018 and average water shares per capita 144 l/day.

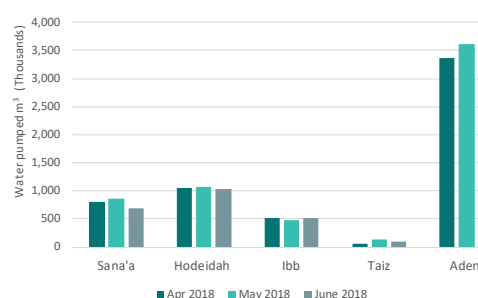
6. Storage capacity (m³)



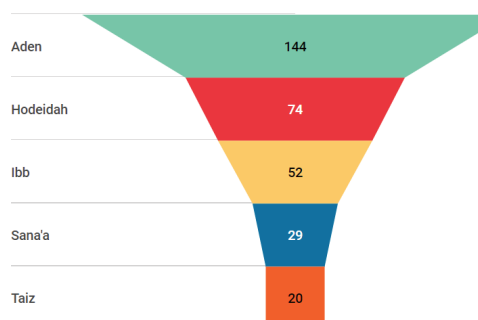
7. Storage capacity (l/capita)³



8. Total quantity of water pumped in the network (m³/month)⁴



9. Per capita quantity of water pumped in the network (l/capita/day)



l/capita. = Liter per Capita

3. The calculation of per capita share of the water produced is based on LCs figures. The water supply provided by the private sector and/or humanitarian agencies was not monitored by the LCs and hence was not calculated in this report.
 4. The water quantity represents the production, not the billed water.

d. Energy cost

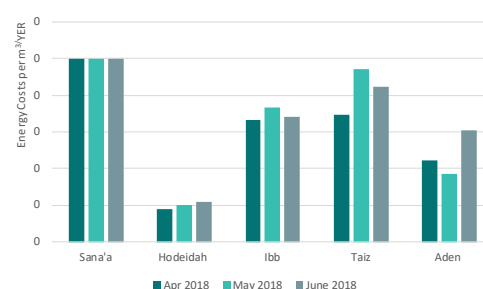
The frequent/entire cut-off of the National Electrical Grid posed a genuine challenge for the LCs to rely on and obtain an adequate amount of fuel for the operation of electric power generators. Therefore, the LCs have exhausted the most efforts to pursue fuel in times of scarcity and price inflation. The energy costs were and still are one of the highest cost factors of the LCs' total operational costs. For instance, Sana'a LC is mostly depending on fuel and also operates in addition about 35 well by the public electricity with a static average energy cost of 250 YER/m³ and higher by 80 YER than in the First Quarter. The energy costs account for 47% of the total operating costs, leaving the LC financially vulnerable to fulfil other liabilities, even though the public electricity bills and fuel supplies are most subsidized by the UNICEF.

The energy costs incurred by Hodeidah LC are quite reasonable 50 YER/m³ compared to other LCs. However, the fuel is of the highest priority given by the LC and accounts for approximately 32% of the total operating costs with consideration to the fuel subsidies provided in this quarter by the UNICEF. Even Ibb LC and in spite of the UNICEF fuel subsidies, was not an exception in obtaining fuel with an average of 174 YER/m³ overwhelming 55% of the total operating costs.

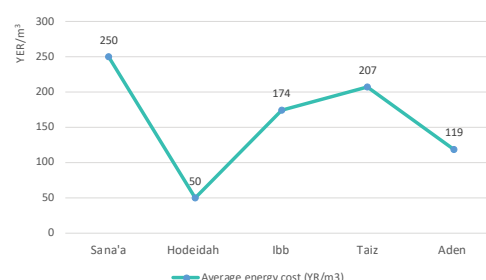
Taiz LC is also another recipient of fuel that is primarily subsidized by the World Food Program 'WFP' to maintain the basic water services. The city occasionally encounters restricted access to fuel supplies, causing cumbersome for the LC to obtain it at double prices costing 207 YER/m³ with 73% of the total operating costs.

Interestingly, the average energy cost of 119 YER/m³ accounts for 100% of the total operating costs of Aden LC in this quarter. These results can demonstrate the extent to which the energy bills paid for diesel and the public electricity are disabling the LC to fulfil other liabilities.

10. Energy cost per m³ of water produced (YER/m³)⁵



Average energy cost (YER/m³)



Reduction on energy expenses⁶

The water utilities have to be released from their staggeringly huge power costs. Options to resume public power supply have to be investigated provided that suitable prices per kWh are applied. If security or other constraints do not allow for public electricity supply, alternatives should be found. Some of the LCs, like Dhamar, Hudaydah, and Sa'ada introduced pilot projects for the use of solar power for operating wells. The necessary investments for solar power measures have been estimated and incorporated in the investment plan for those LCs where it is applicable. In Dhamar, Hudaydah including the affiliated utilities, Abyan, Lahij, Aden and Sa'ada solar power would be a suitable alternative to the generators. First estimations indicate that the use of solar systems would reduce the operational cost by about 30 % of current electricity cost. Other options for other alternative energy sources as wind energy, geothermal energy, and biogas have to be investigated through Feasibility Studies individually for the LCs as outlined in more details in Chapter 6.4.3.

5. 1 Euro € ≈ 536 YER

1 US \$ ≈ 460 YER (June, 2018)

Source: InfoEuro http://ec.europa.eu/budget/contracts_grants/info_contracts/infoeuro/index_en.cfm

6. GIZ IDWS/Damage Assessment Study DAS Stage 3 – Part 1: Resilience Strategy Report – Enhancing the Resilience of the LCs during Conflict and in Post-conflict Scenario - 2018

e. Performance of pumps and generators

Since 2015, the financial constraints and the suspension of investment programs have precluded the LCs from adequately maintaining/rehabilitating their infrastructure. At the same time, donor organizations have provided urgent subsidies for fuel and equipment such as spare parts, pumps, generators and for small-scale investments. However, due to the massive impact of the prolonged fragile situation, frequent rising demands for urgent materials, equipment and fuel were not provided to the full extent to the LCs.

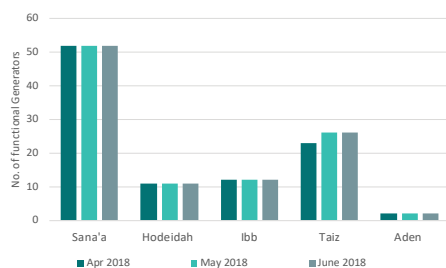
Basically, most of the LCs no longer relying on the national electric system, the efficiency of water pumps and production is largely interdependent on the supply of fuel as an alternative resort for the operation of electric generators.

In this quarter and as can be mainly attributed to the adequate accessibility of fuel, LC Sana'a has been able to deploy 11 additional pumps out of a total 55 functional pumps to increase the water production rate by an average of 10 hours per day. Likewise, Hodeidah LC managed to maintain the same performance of generators (11) for running 71% of the pumps as of the First Quarter. Meanwhile, the LC has the highest record of pumps failures due to lack of spare parts and overworks (21 hours daily) in severe humidity and temperature conditions. This entailed the LC to govern their asset and adopt an efficient O&M emergency plan to carry out regular inspection and maintenance.

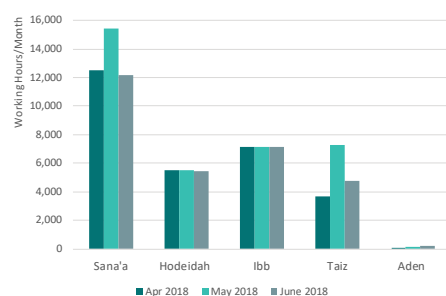
The LC of Ibb was able to steadily employ the full capacity of the electric generators to run about 90% of the main pumps and maintaining a reliable water production for most of the city at 20 hours/day. Whereas Taiz LC had installed 3 additional generators (23 to 26) to achieve an acceptable level of water production with an average of 6 hours/day. This signifies that durability, as well as the availability/lack of fuel supply, are critical factors influencing the number of functional pumps in operation.

Compared to other LCs, the LC of Aden uses 93 out of 126 water pumps running on an average of 22 hours per day. This promising capacity can also be viewed as a twofold dependency by the LC of Aden on (i) the Public Electricity System and (ii) the electric generators to supply energy during the power cut to an average of 2.3 hours per day for the water production.

15. Number of working generators in the operation of pumps.



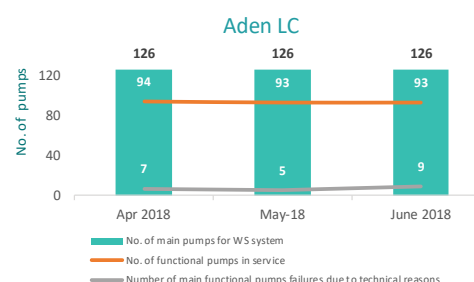
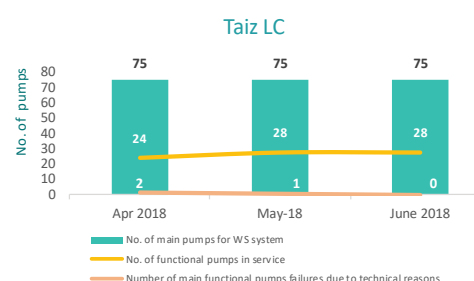
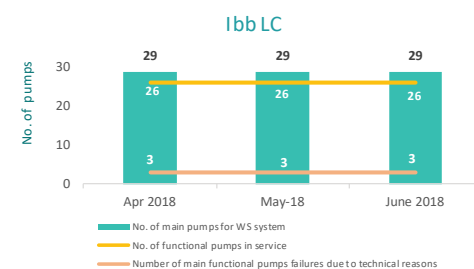
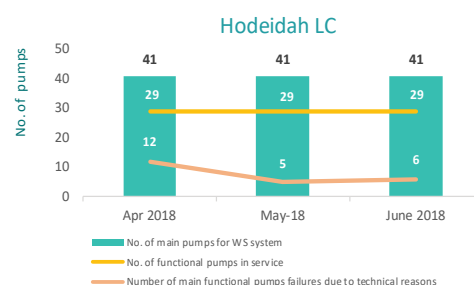
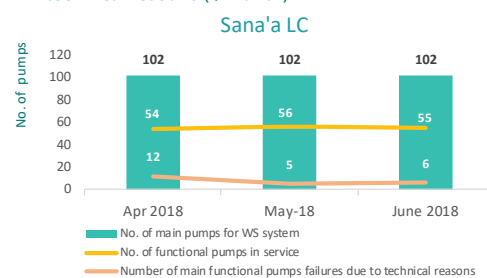
16. Number of working hours of all operating generators used to run the functional pumps that pump water (h/month).



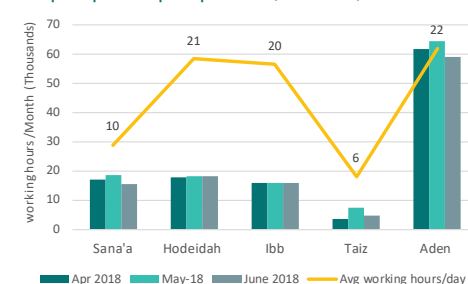
11. Number of main pumps for the water supply system⁷

12. Number of functional water pumps in service

13. Number of main functional pump failures due to technical reasons (-/month)



14. Number of working hours of all operating pumps that pump water (h/month)



7. The number of pumps represent the pumps in well fields and in pumping station in network.

f. Financial Viability

Depending on the tariff and customer structure, the revenues from water sales, sanitation services and new connections is under normal circumstances; the main source of income for the LCs, and if efficiently collected, would be sufficient to cover the total operation costs. These comprise costs for monthly running expenses like salaries, fuel, electricity, spare parts for O&M and some minor other costs. Salary and fuel are the highest cost factors in the overall operating costs. The expenses on energy had increased significantly resulting in a less available budget for necessary O&M activities. Whereas expenses which are not actually paid are recorded as accounts payable. For example, some LCs have been unable to pay their salaries since late 2017 or even to cover fixed subscription fees of electricity and insurance costs.

In this quarter, the billing amounts have been noticeably increased by 7% as a consequence of continued efforts exerted by Sana'a LC to improve the service. Furthermore, the LC was supported by GIZ Water program with the Personal Digital Assistance (PDAs) to improve the quality of billing collection. This improvement was associated with 9% increment of revenues collected from the customers who ultimately realized the unbearable cost burdens paid for the water tankers. The LC was also able to cover 51% of the cost coverage in June 2018 out of total average 35% in this quarter.

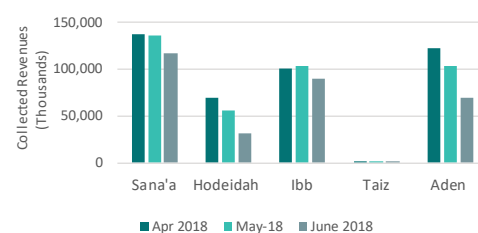
Identically, Hodeidah LC was active in billing water services by 5% over the First Quarter, but showed regress in collection efficiency by -45% drop due to the security turbulence that hit the city in mid - June 2018. The LC also incurred consecutive extra operating costs during this quarter, with an average cost coverage deficiency by 37%.

Ibb LC collected revenues with an average efficiency of 75% and -13% lower than the First Quarter. Simultaneously, this was reflected indeed on the ability to cover the operational costs by only 62%. This alarms to other critical factors affecting billing and collection, such as (i) unsuitable tariff structure / fee calculation, (ii) unrealized billing and collection procedures.

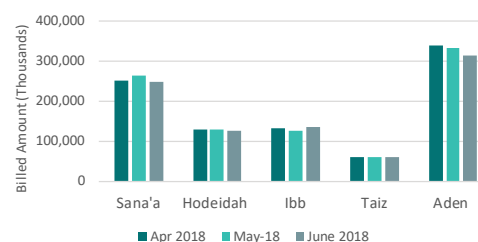
To this moment, Taiz LC is distributing water almost free of charge to citizens for humanitarian relief. On this basis, the LC's actual billed revenues are derived from the monthly fixed subscriptions of water and sewer services, local councils and meter maintenance fees. The collection efficiency of 2% is giving a clear implication about the LC readiness to manage their billing and collection procedures. Principally, the LC is still not fully adapted and pursue for stability and conducive environment to resume business operations by means of adequate office, equipment and operational funds.

Low collection efficiency 30% and revenues are endangering the financial sustainability of Aden LC. To this end, the LC has to take corrective institutional measures to enhance their billing and collection system against the acceptable level of service provided to their customers. For important considerations, the LC must gradually attempt to recover and skip from the state of conflict repercussion, and strive for sufficient financial resources to reinforce their resilience in time of abrupt discontinuity of external support partially covering their liabilities.

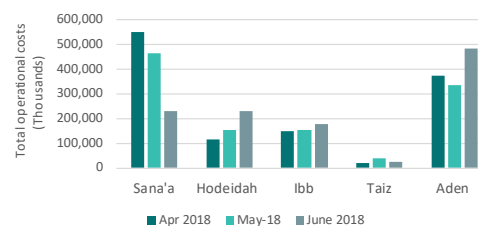
17. Collected revenues (YER/month)⁸



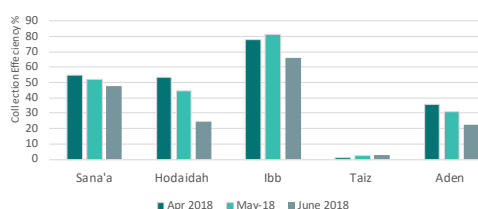
18. Billed amount (YER/month)



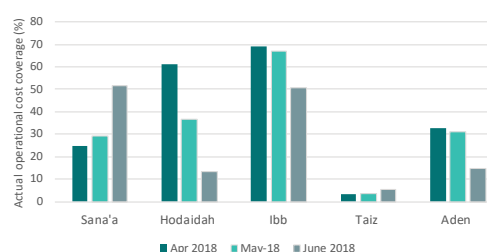
19. Total operational costs (YER/month)



20. Collected revenues vs. billed amount (%)



21. Actual operational cost coverage (%)



8. Revenues including domestic, commercial & governmental collection

Monthly governmental subsidies

Other sources of income from the Ministry of Finance (MoF) were provided to the LCs in form of investment programs for infrastructure development and expansion of coverage. Unfortunately, government support has been reduced drastically since 2015. However, some LCs have been occasionally supported by other financial channels, while others are entirely dependent on their water sales. Aden LC as an exception, is receiving a fixed monthly allocation 180 million YR from the Ministry of Finance to pay the salaries.

Most of the international funding organizations suspended their development projects approximately since 2014, and focused their support to the LCs in relevance only to in-kind subsidies for emergency relief in the form of fuel, spares and some equipment.

Percentage of basic monthly salaries paid (%)

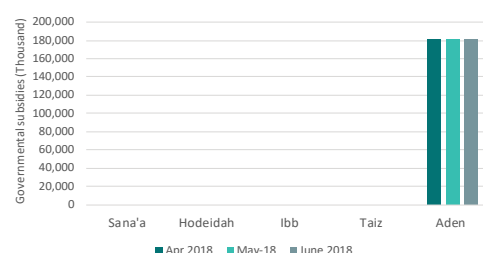
As usual, managing salary payments differed vastly among the reported LCs and based on distinctive operational and financial conditions for each of them. It was observed that LCs of Sana'a & Hodeidah are still in distress to fulfil only 50% of the salaries' payment, where the majority of revenues collected are expensed to cover other heavy operating costs.

Ibb LC has effectively overcome this challenge in paying 100% of the monthly salaries. This is due to the fact of collective efforts and perseverance of LC management which aspires and succeeded to satisfy their customers to willingly pay for services suitably equivalent to cover the operating costs.

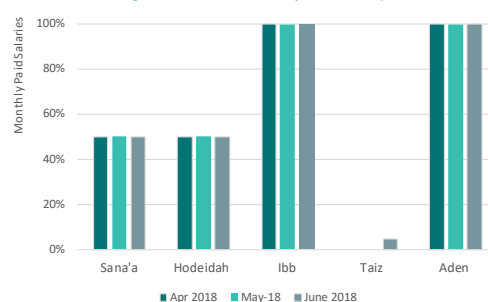
To date, salary payment is a point of debilitation for Taiz LC to resolve either from the water sales or by the government. As an urgent measure, incentives were paid for the duty staff as one of the assistance packages provided to the LC on an intermittent basis. Contrary to the First Quarter, low collected revenues contributed only to cover 5% of salaries without external incentives.

Although they barely cover any other operational costs. Aden LC finds no constraints and was able to secure 100% of the salaries per month from the Ministry of Finance. This led to the same conclusion for the LC to devise alternate solutions to promote their financial viability and resilience.

22. Monthly governmental subsidies



23. Percentage of basic monthly salaries paid (%)



5 Resilience factors⁹

Disruptions of water supply & sanitation services can be caused by adverse effects on any one of the components that make up the service: people (e.g. skilled staff), hardware (e.g. infrastructure, equipment) and consumables (e.g. fuel, equipment, spare parts). Neither of these components is sufficient on its own. It is pointless having the spare parts required to repair electric generators, for instance, if the only technical staff able to install them are lacking the pertaining capacities and skills.

The LCs must increasingly strive to become more resilient and maintain services during/post-conflict. They must, therefore, address long-standing vulnerabilities in order to mitigate the cumulative effects of the conflict and gradually reduce their dependence on external short-term assistance.

At present, external assistance programmes, instead of sporadic crisis interventions, must seek to intervene in technical and investment measures. While these interventions may be essential during relief efforts, the resumption and strengthening of the LCs' capacity are equally synonymous with building resilience. It is the resilience that allows the LCs to maintain the reliable delivery of services in the short, medium and long-term. The table beside presents the identified resilience factors with their expected impact after the implementation of related activities.

RESILIENCE MEASURES AND IMPACT

Main Activity	Resilience Factor	Impact
Technical Assistance – Capacity building	Improve governance and management skills on top level.	<ul style="list-style-type: none"> • Support and guide the LC management during the crisis in the decision making of required actions and measures. • Enable managers and key staff to prepare and introduce customized policies and procedures to increase the performance of the utility. • Enhance the coordination and cooperation among the different stakeholders (donors). • Enhance monitoring, evaluation and accountability of the LC to increase the performance.
Technical Assistance – Capacity building, Financial support, Consultancy support, equipment support	Enhance the work capacity and skills of the employees. Human resource development	<ul style="list-style-type: none"> • Operate the utility more efficient and organized. • Improve coordination and cooperation among different departments. • Improve and increase the service for customers. • Manage professionally the exceptional work. Environment and the new technologies. • Reduce administrative water losses and increase revenue collection.
Technical Assistance – Financial support, Awareness building; Coaching, Investments	Strengthen the financial capacity of the utility.	<ul style="list-style-type: none"> • Ensure financial means at least to cover the minimum needs for operation of the utility. • Enable urgently needed repair and maintenance of the infrastructure. • Initiate pro-poor projects. • Keep motivated staff. • Enhance financial sustainability.
Technical Assistance – Awareness building, Operation Management Support	Improve customer management and customer relation.	<ul style="list-style-type: none"> • Increase service coverage and numbers of customers. • Enhance billing and collection procedures. • Increase collection efficiency and revenues. • Establish good customer relation to improve payment moral.
Investment – Rehabilitation, Maintenance, Extension	Increase water service coverage and supplied quantities.	<ul style="list-style-type: none"> • Increase water availability for urban residents. • Improve water supply condition. • Reduce physical water losses. • Increase number of customers. • Improve water quality.
Investment – Rehabilitation, Maintenance, Extension	Improve and extend sewer system.	<ul style="list-style-type: none"> • Improve hygiene and health situation for urban residents. • Protect environment and water sources. • Increase number of customers.
Investment	Provide renewable energy system (Photovoltaic).	<ul style="list-style-type: none"> • Operate water and sanitation facilities sufficiently. • Operate LC offices during working hours. • Reduce operation and maintenance costs.

Annex Resilience Emergency Indicators Sheet April - June 2018

Urban Water Sector - Sana'a LC, Aden LC, Hodeidah LC, Ibb LC & Taiz LC

No.	Data / Indicator	LC	Unit	1 st Q			2 nd Q		
				Jan-18	Feb-18	Mar-18	April-18	May -18	June -18
1	عدد السكان في المراكز الحضرية المخدومة من قبل مزود الخدمة (شهري في نهاية الشهر) Number of Population of urban centers	Sana'a	Cap	2,821,334	2,821,334	2,821,334	2,821,334	2,821,334	2,821,334
		Hodeidah		655,686	657,452	659,223	660,999	662,780	664,566
		Ibb		396,786	396,786	396,786	391,557	391,557	391,557
		Taiz		700,049	701,983	703,922	703,916	705,210	706,506
		Aden		1,052,074	1,052,074	1,052,074	1,052,074	1,052,074	1,052,074
2	عدد النازحين الى مناطق امتياز مزود الخدمة (شهري في نهاية الشهر) Number of IDPs in the served Area	Sana'a	Cap	158,604	158,604	158,604	166,380	166,380	215,346
		Hodeidah		–	–	–	–	–	133,830
		Ibb		99,687	99,687	99,687	150,000	150,000	190,392
		Taiz		–	–	–	–	–	387,426
		Aden		–	–	–	–	–	50,178
3	عدد السكان المخدومين بالمياه من قبل مزود الخدمة (شهري في نهاية الشهر) Number of population served through water supply network	Sana'a	Cap	911,370	911,370	911,370	954,580	954,580	954,580
		Hodeidah		476,322	476,756	477,288	477,820	478,212	478,212
		Ibb		324,280	326,720	328,000	330,000	331,640	332,650
		Taiz		225,266	182,752	76,176	150,021	226,109	156,345
		Aden		781,254	784,920	786,456	921,004	923,202	923,832
4	نسبة عدد السكان المخدومين بالمياه من قبل مزود الخدمة من اجمالي السكان (شهري في نهاية الشهر) Water supply service coverage = population served through water supply network vs. total population	Sana'a	%	32	32	32	34	34	34
		Hodeidah		73	73	72	72	72	72
		Ibb		82	82	83	84	85	85
		Taiz		32	26	11	21	32	22
		Aden		74	75	75	88	88	88
5	عدد ايام تزويد الخدمة خلال الشهر (تزويد المياه من خلال شبكة التوزيع) Number of service days of piped water supply per month	Sana'a	day / month	1	1	2	2	2	2
		Hodeidah		25	25	25	25	25	25
		Ibb		7	7	7	7	12	12
		Taiz		6	5	1	5	6	5
		Aden		18	18	18	18	18	18
6	إجمالي كمية المياه المضخة من خلال شبكة التوزيع Total Quantity of water pumped in the network	Sana'a	m ³ / month	496,906	383,908	819,326	804,320	855,672	686,021
		Hodeidah		1,135,689	935,422	1,081,749	1,051,616	1,077,058	1,040,184
		Ibb		510,892	510,922	479,325	524,057	476,644	512,375
		Taiz		95,920	68,065	24,980	67,011	131,566	91,625
		Aden		3,291,000	3,103,000	3,406,000	3,358,777	3,616,639	3,179,221
7	نصيب الفرد من المياه المضخة في الشبكة Per capita quantity of water pumped in the network	Sana'a	l / cap / day	18	14	29	27	29	23
		Hodeidah		77	63	73	71	73	70
		Ibb		51	50	47	51	46	50
		Taiz		14	12	11	14	19	19
		Aden		136	128	140	118	126	111

No.	Data / Indicator	LC	Unit	1 st Q			2 nd Q		
				Jan-18	Feb-18	Mar-18	April-18	May -18	June -18
8	تكلفة الطاقة لكل متر مكعب منتج من المياه خلال الشهر Energy Costs per m ³ water produced	Sana'a	YR / m ³	170	170	170	250	250	250
		Hodeidah		46	50	90	45	50	55
		Ibb		171	171	183	167	184	171
		Taiz		169	209	113	174	236	211
		Aden		90	108	111	111	93	152
9	الطاقة التخزينية الشهرية المتاحة Storage capacity	Sana'a	m ³	36,000	36,000	36,000	36,000	36,000	36,000
		Hodeidah		25,000	25,000	25,000	25,000	25,000	25,000
		Ibb		4,000	4,000	4,000	4,000	4,000	4,000
		Taiz		11,500	11,500	11,500	22,002	22,002	22,002
		Aden		94,783	94,783	94,783	94,783	94,783	94,783
10	نصيب الفرد من الطاقة التخزينية المتاحة Storage capacity share per capita	Sana'a	l/cap	40	40	40	38	38	38
		Hodeidah		52	52	52	52	52	52
		Ibb		12	12	12	12	12	12
		Taiz		51	63	151	147	97	141
		Aden		121	121	121	103	103	103
11	إجمالي عدد المضخات الرئيسية Total number of main pumps for the water supply system	Sana'a	No.	102	102	102	102	102	102
		Hodeidah		41	41	41	41	41	41
		Ibb		29	29	29	29	29	29
		Taiz		75	75	75	75	75	75
		Aden		126	126	126	126	126	126
12	عدد المضخات الرئيسية العاملة والتي تضخ المياه خلال الشهر Number of functional pumps in service	Sana'a	No.	43	36	54	54	56	55
		Hodeidah		29	29	29	29	29	29
		Ibb		26	26	26	26	26	26
		Taiz		31	27	19	24	28	28
		Aden		90	100	106	94	93	93
13	عدد ساعات عمل (تشغيل) المضخات (كل المضخات العاملة والتي تضخ المياه) في الشهر Number of working hours of all operating pumps that pumps water	Sana'a	h / month	9,828	7,764	13,837	16,974	18,623	15,477
		Hodeidah		19,550	15,780	17,927	17,759	18,352	18,242
		Ibb		14,391	14,392	13,502	15,720	15,720	15,720
		Taiz		5,302	3,797	1,264	3,610	7,227	4,694
		Aden		64,601	64,682	64,366	61,931	64,533	59,079
14	عدد الأعطال الناتجة عن اسباب فنية خلال الشهر للمضخات الرئيسية العاملة في ضخ المياه Number of main functional pumps failures due to technical reasons	Sana'a	/	6	4	7	12	5	6
		Hodeidah		8	10	7	16	12	8
		Ibb		3	3	3	3	3	3
		Taiz		0	4	1	2	1	0
		Aden		–	–	–	7	5	9
15	عدد المولدات العاملة في تشغيل المضخات Number of working generators in the operation of pumps	Sana'a	No.	6	6	49	52	52	52
		Hodeidah		11	11	11	11	11	11
		Ibb		12	12	12	12	12	12
		Taiz		27	26	18	23	26	26
		Aden		–	–	–	2	2	2

No.	Data / Indicator	LC	Unit	1 st Q			2 nd Q		
				Jan-18	Feb-18	Mar-18	April-18	May-18	June -18
16	عدد ساعات عمل (تشغيل) المولدات (كل المولدات العاملة المستخدمة في تشغيل المضخات لضخ المياه) خلال الشهر Number of working hours of all operating generators used to run the functional pumps that pumps water	Sana'a	h / month	2,548	2,205	9,127	12,533	15,406	12,178
		Hodeidah		2,701	2,921	3,130	5,484	5,490	5,420
		Ibb		4,912	4,913	4,609	7,140	7,140	7,140
		Taiz		5,302	3,797	1,264	3,643	7,307	4,759
		Aden		–	–	–	100	150	180
17	قيمة الإيرادات الشهرية المحصلة Collected revenues	Sana'a	YR / month	107,995,495	126,904,963	120,528,387	137,281,901	136,472,408	117,608,430
		Hodeidah		75,224,010	74,474,656	78,612,051	69,441,783	56,829,220	31,159,535
		Ibb		111,929,351	105,317,621	104,125,088	101,655,753	103,695,045	90,430,797
		Taiz		245,000	301,000	511,500	649,880	1,284,000	1,442,980
		Aden		124,455,515	116,641,407	124,485,813	122,502,882	103,572,012	70,329,130
18	قيمة الإيرادات الشهرية المفوترة (قيمة مبيعات المياه الشهرية المفوترة) Billed amount	Sana'a	YR / month	233,018,823	233,098,029	242,708,174	250,412,935	263,701,936	247,407,726
		Hodeidah		130,297,953	114,570,797	120,689,068	129,545,587	127,783,997	126,588,513
		Ibb		122,096,750	128,118,681	115,575,324	130,903,158	127,062,768	136,595,765
		Taiz		58,405,496	58,405,496	58,405,496	58,451,610	58,451,610	58,496,464
		Aden		369,991,199	366,253,993	351,006,382	340,342,134	332,527,223	312,926,450
19	إجمالي التكاليف التشغيلية Total operational costs	Sana'a	YR / month	282,644,612	321,473,710	280,109,556	549,831,015	464,882,574	228,798,784
		Hodeidah		144,669,788	113,378,469	163,237,192	113,901,721	155,577,191	231,132,726
		Ibb		148,877,285	158,482,479	156,139,001	147,175,871	155,121,489	177,786,575
		Taiz		22,678,776	20,211,550	9,193,500	18,434,803	38,094,600	26,388,450
		Aden		295,909,085	336,166,277	–	371,889,702	335,662,317	482,614,742
20	نسبة التحصيل Collected revenues vs. billed amount	Sana'a	%	46	54	50	55	52	48
		Hodeidah		58	65	65	54	44	25
		Ibb		92	82	90	78	82	66
		Taiz		0	1	1	1	2	2
		Aden		34	32	35	36	31	22
21	التغطية التشغيلية المحصلة للكلفة Actual operational cost coverage	Sana'a	%	38	39	43	25	29	51
		Hodeidah		52	66	48	61	37	13
		Ibb		75	66	67	69	67	51
		Taiz		1	1	6	4	3	5
		Aden		42	35	33	33	31	15
22	قيمة الإعانات (المعونات) الحكومية الشهرية لمزود الخدمة Monthly governmental subsidies	Sana'a	YR	0	0	0	0	0	0
		Hodeidah		0	0	0	0	0	0
		Ibb		0	0	0	0	0	0
		Taiz		0	0	0	0	0	0
		Aden		182,146,000	182,146,000	182,146,000	181,646,794	181,646,794	181,646,794
23	نسبة الرواتب الأساسية الشهرية المدفوعة للموظفين Percentage of basic monthly salaries paid	Sana'a	%	50%	50%	50%	50%	50%	50%
		Hodeidah		0%	0%	0%	50%	50%	50%
		Ibb		100%	100%	100%	100%	100%	100%
		Taiz		0%	0%	0%	0%	0%	5%
		Aden		100%	100%	100%	100%	100%	100%

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